UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

12/15/86 cc. H.L. Sonnenschein

REPLY TO THE ATTENTION OF

19 NOV 1986

5CA-16

145437

Richard J. Kissel
Martin, Craig, Chester & Sonnenschein
55 West Monroe Street
Chicago, Illinois 60603

Re: Cerro Copper Products Company
Pretreatment Regulations Administrative Order
Docket No. V-W-86-AO-41

Dear Mr. Kissel:

I am responding to your October 20, 1986 letter addressed to Charles H. Sutfin, Director, Water Division, in which you request a meeting to discuss U.S. EPA's September 30, 1986, Administrative Order issued to Cerro Copper Products Company. This letter is meant to discuss the concerns you outlined in that letter.

First, I would like to note that contrary to your letter's claim, you did receive notice of U.S. EPA's intention to issue this Order. Such notice was given to you in our telephone conversation on September 19, 1986. Second, U.S. EPA disagrees with your interpretation of Section 309 of the Clean Water Act in this instance. 33 U.S.C. §1319. Section 309(a)(4) requires an opportunity to confer with the Administrator only upon the issuance of an Order which alleges violations of Section 308. U.S. EPA's September 30, 1986, Order finds violations of Section 307, 33 U.S.C. §1317, orders compliance with the regulations promulgated thereunder, and in paragraph 2 of the Order section invokes the Administrator's authority under §308, 33 U.S.C. §1318, to request information, but in no manner alleges violations of Section 308. For this reason, Cerro Copper does not hold a right under 33 U.S.C. §1319(a)(4) to confer with the Administrator because of the issuance of this Order.

Our telephone conference of September 2, 1986, was arranged to elicit from Cerro Copper dates by which it could provide the information and materials which had been previously required by July 29, 1986. This telephone conference resulted in the compliance schedule found in our Order. Under these circumstances, this office expects timely compliance with its Order.

Your letter notes that your submission of a compliance schedule is totally dependent upon the results of Cerro's Phase II

See Note On P. 2

study. I suggest that a meeting be held after the Phase II study is complete if Cerro Copper at that time finds that the submission of a compliance schedule by January 31, 1987, is impossible. In the meantime, the Water Division, through Anne Weinert or Jerry Rogers, will be in contact with you regarding your submissions under the terms of the Order and can answer any questions regarding the Order that your client might have. If you have any questions, please contact me by telephone at (312) 886-4273.

Sincerely,

Thomas J. Martin, Jr.

Thomas J. Martin, Jr.
Assistant Regional Counsel

cc: Anne Weinert
Ken Fenner
Charles Sutfin

12/15/86

Hank - This is U.S.EPA Region V Response To An Earlier Letter By Kisor On The Subject Of Compliance With BMR Regs. You Were Copied On Kisor's Letter, But I Have Attached It For Easier Reading.

The Compliance Schedule They Want By 1/31/87 Deals With Pretreatment Compliance. Until We Complete The Phase II Study, And "Engineer" Solutions, If Needed, We Cannot Know The EPA's Schedule, As We Have Indicated In The Past.

Sandy And Jim Will Review The Data We Promised By Dec. 31, 1986, And It Will Be Submitted On Time. Anything Beyond That Point Will Have To Be Further Negotiated.

C07297

Paul

cc: P. Tandler
H. S. Schweich

Law Offices
Martin, Craig, Chester & Sonnenschein
55 West Monroe Street
Chicago, Illinois
60603

October 20, 1986

TELEPHONE 368-9700
AREA CODE 312

Mr. Charles H. Sutfin
Director, Water Division
United States Environmental
Protection Agency
230 South Dearborn Street
Chicago, Illinois 60604

Re: Cerro Copper Products Company
Pretreatment Regulations Compliance
Order Docket No. V-W-86-A0-41

Dear Mr. Sutfin:

On behalf of my client, Cerro Copper Products Co. ("Cerro Copper"), I am writing to you concerning the above-referenced Compliance Order dated September 29, 1986. I had not anticipated the issuance of the Compliance Order since the United States Environmental Protection Agency (Region V) ("U.S.EPA") had not previously indicated any intent to take such action against Cerro Copper. As Cerro Copper had previously stated it would submit the additional information U.S.EPA had requested concerning the General Pretreatment Regulations, and has already begun to produce that information, I do not believe the issuance of the Compliance Order was warranted. Therefore, as the Compliance Order was issued pursuant to Section 1318 of the Clean Water Act ("the Act"), 33 U.S.C. 1318, Cerro Copper requests the opportunity it is afforded under Section 1319(a)(4) of the Act to confer with you, as the Administrator's designated representative, concerning the alleged violations and terms contained in the Order. In anticipation for our meeting, I have summarized below some of Cerro Copper's concerns in this regard.

Certain of the terms of the Compliance Order are inaccurate. For example, Paragraph 11 of the Findings (p. 3), provides that the schedule Cerro Copper provided to U.S.EPA on September 16, 1986 for the submission of the additional information U.S.EPA requested has been incorporated into the Order. This statement is not accurate with respect to the schedule set forth in Paragraphs 1(a) and (e) of the Order (pp. 3 & 4). Cerro Copper's September 16, 1986 letter to Ms. Anne Weinert of U.S.EPA (Region V) submitting the referenced schedule specifically states that the wastewater flows data was expected to be available for submission to U.S.EPA "around the end of this year." However, Paragraph 1(b) of the Order provides that wastewater flow data (as required by 40 CFR 403.12(b)(4)) must be submitted no later

C07298

than October 15, 1986. Obviously, this is not consistent with the schedule submitted by Cerro Copper which the Order claims to have incorporated. For your convenience, I have enclosed a copy of Cerro Copper's September 16, 1986 letter to Ms. Weinert.

Similarly, Paragraph 1 of the Order (p. 4) requires the submission of a Compliance Schedule by January 31, 1987. Cerro Copper stated in its September 16, 1986 letter that the submission of a Compliance Schedule was totally dependent upon the results disclosed in the data provided by Cerro Copper's Phase II study. The Order incorporates the earliest possible date on which Cerro Copper could anticipate having such information available and thus, unreasonably exposes the company to a potential violation of the Order's terms should the results of the Phase II study necessitate additional time for the development of a Compliance Schedule, should such a schedule in fact be required.

Further, the Compliance Order as drafted creates confusion concerning the nature of the information which Cerro Copper is to submit in accordance with the schedule provided therein. In Paragraph 9 of the Findings, the Order states that U.S.EPA directed Cerro Copper to resubmit its BMR reports with certain information identified in the July 29, 1986 U.S.EPA letter attached to the Order as Exhibit A. Yet, in that portion of the Order identifying the information which Cerro Copper is to submit (See Order at pp. 3-4), various sections of the General Pretreatment Regulations are referenced in lieu of any reference to the information requested in the July 29, 1986 letter attached as Exhibit A. Consequently, the Order by its terms appears to reject the U.S.EPA's prior specific information requests (which in some instances differ from the regulations) and instead directs Cerro Copper to follow only the language of the regulations in identifying the information to be submitted. This conclusion, however, is inconsistent with the substance of prior communications between Cerro Copper and U.S.EPA.

Cerro Copper has been and is continuing its efforts to cooperate with the U.S.EPA in submitting the requested information as soon as possible. Cerro Copper's inability to submit the wastewater flows data by October 15, 1986 was not in any way intentional. As you know, the Phase II study which Cerro Copper has undertaken is extensive, including a seven day, twenty-four hour sampling program at 21 different points in the Cerro Copper waste stream which generated 13,000 data points. Consequently, Cerro Copper did not receive the laboratory reports on these voluminous samples generated by the Phase II study until August, 1986. These reports were reviewed and certain variances discovered in the laboratory results reported necessitated and

hence were subjected to further investigation. Once this additional investigation was completed, work was then started to input all of the laboratory results into a computer to provide a means for analysis of the laboratory results by Patterson Associates, Inc. and thus, the submission of the wastewater flow information which U.S.EPA has requested. Cerro Copper has proceeded with the above-described Phase II study with all due speed. However, the data from the laboratory reports data is still in the process of being inputted into a computer and therefore, the wastewater flow data which U.S.EPA has requested is not yet available. As we previously anticipated, Patterson Associates will not be able to complete its preparation of the wastewater flow data for submission to U.S.EPA before December 31, 1986.

As soon as you have had an opportunity to review this matter, please contact me so that we can arrange a mutually convenient time at which to discuss these issues further.

Very truly yours.

Richard J. Kissel

RJK/kw

encl.

cc: Chief
Compliance Section (5WQC-TUB-8)
United States Environmental Protection Agency
230 South Dearborn Street
Chicago, Illinois 60604

Chief
Compliance Assurance Section
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 62706

CERRO COPPER PRODUCTS CO.
A member of The Marmon Group of companies
P.O. Box 681
East St. Louis, Illinois 62202
618/337-6000

September 16, 1986

Ms. Anne Weinert
United States Environmental
Protection Agency, Region V
230 South Dearborn Street
Chicago, IL 60604

Dear Ms. Weinert:

A comprehensive wastewater characterization study at the Cerro facility was conducted in April of this year by Patterson Associates, Inc. As Dr. Patterson explained, this study included a seven day round the clock sampling program at 21 different points in the Cerro waste stream. In August, the final reports from the laboratories were received and these have yielded some 13,000 data points which Patterson Associates, Inc. is currently evaluating to provide much of the data requested in Attachment I to the July 29th letter from J. David Ranken.

The complexity of this study (identified as "Phase II") can be appreciated when consideration is given to the fact that the Cerro facility at Sauget is the only fully integrated copper plant in this country. It is more than 60 years old and its pattern of growth, expansion and modernization has resulted in a physical arrangement having many of the operations overlapping and interconnected rather than a straight line arrangement. This has resulted in a wastewater flow configuration that is extremely complex. The operations are subject to three different National Categorical Pretreatment Standards.

Most of the information requested in paragraph (1), Nature of Operation, in Attachment I, has been prepared and can be submitted by the end of this month. This would not include any flow data which would need to be derived from the Phase II study, and Dr. Patterson indicated that there should be sufficient information available by October 15 to provide the flow data.

Items (2) - Wastewater Flows and (3) Nature and Concentration of Pollutants require completion of the Phase II study to provide the information requested therein. At the present time we believe that

this will be available around the end of December of this year. Dr. Patterson has indicated that it would be possible to provide the information on wastewater flows several weeks in advance of the completion of the Phase II study. However, this would entail a considerable amount of extra work on his part and we would much prefer to submit both at the same time.

Compliance Certification, Item (4), would be provided along with Items (2) and (3) at the completion of the Phase II study.

Item (5), Compliance Schedule, is very difficult to determine at this time because it is totally contingent on the data that would be provided by the Phase II study. Under most optimistic circumstances it might be available 30 days after the completion of Phase II. On the other hand, if those results necessitate further engineering studies it would be a matter of several additional months before a reasonable compliance schedule could be derived.

Very truly yours,

CERRO COPPER PRODUCTS CO.
A member of The Marmon Group
of companies

S. A. Silverstein
Manager of Energy and
Environmental Affairs

SAS/ge

bcc: P. Tandler
R. Kissel
J. Patterson
File

bcc: R. Kissel
J. Patterson
P. Tandler
File

CERRO COPPER PRODUCTS CO.
A member of The Marmon Group of companies
P.O. Box 681
East St. Louis, Illinois 62202
618/337-6000

November 20, 1986

Mr. Michael J. Mikulka, Chief
Enforcement Unit II
United States Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, IL 60604

Attention: 5WQC-TUB-8

RE: Administrative Order - Docket No. V-W-86-AO-41

Dear Mr. Mikulka:

In response to your letter of November 4, 1986 the following information is offered:

1. The six points of discharge entering Dead Creek all collect storm water and/or non-contact cooling water. Due to the complexity and age of our sewer system, as previously pointed out, it is possible that some process water may enter these streams in minor quantities. Dead Creek is completely closed off at the south end of our property and at the north end it discharges into the Village of Sauget sewer at the same point where our east outfall discharges; accordingly, it is merely a conduit in the Village of Sauget sewer system.

2. All of our process, cooling, sanitary and storm water discharges to the Village of Sauget sewer system. It is a single flow system with no provisions for separation of wastewater.

3. The information in our forthcoming report to be submitted by December 31, 1986 will include average daily and maximum daily flow for regulated process streams and other streams as necessary to allow use of the combined wastestream formula. The data will be as complete as possible within the parameters of the Phase II Study as explained in our letter of September 16, 1986.

We trust that the foregoing provides the information requested, however, if there are any questions or any additional information is desired we are prepared to provide same to the best of our ability.

Very truly yours,

CERRO COPPER PRODUCTS CO.
A member of The Marmon Group of companies

S. A. Silverstein
Manager of Energy and Environmental Affairs

C07303

SAS/ge

145195

CERRO COPPER PRODUCTS CO.
A member of The Marmon Group of companies
P.O. Box 681
East St. Louis, Illinois 62202
618/337-6000

November 7, 1986

Dr. James Patterson
Patterson Associates, Inc.
1540 N. State Parkway, Unit 13-A
Chicago, IL 60610

Dear Jim:

Our most recent submital to U.S.EPA, Region 5, has brought forth the attached inquiry from them. Our response to the first two questions present no problem, but I would appreciate your comments and suggestions regarding our response to their third question.

Kindest personal regards,

Yours very truly,

CERRO COPPER PRODUCTS CO.
A member of The Marmon Group
of companies

S. A. Silverstein
Manager of Energy and
Environmental Affairs

SAS/ge

cc: R. Kissel
R. Tandler
File

C07304

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:
5WQC-TUB-8

NOV 4 1986

S.A. Silverstein, Manager
Energy and Environmental Affairs
Cerro Copper Products Co.
P.O. Box 681
East St. Louis, Illinois 62202

Re: Administrative Order
Docket No. V-W-86-AO-41

Dear Mr. Silverstein:

We have completed a preliminary review of the information submitted to date under the terms of the above Administrative Order and have found we need clarification on several items. The particular items are listed below.

1. Describe the type of water(storm, cooling, sanitary, or process) that is discharged from the six points the drawings show enter Dead Creek directly. Indicate whether these are regulated under a NPDES permit.

2. It is unclear whether process, cooling, sanitary, and storm water, including roof, road, and yard drains all discharge to the same sewer system or whether separate sewers are used to transport different types of wastewater. If separate sewers are available, a key is needed to show the different sewers.

3. The regulation describing the content of BMRs requires that flow measurements are to be reported as average daily and maximum daily flow and include regulated process streams and other streams as necessary to allow use of the combined wastestream formula. Please indicate if this information will be forthcoming in the December 31, 1986, report.

We reserve the right to raise additional comments once the Phase II study has been submitted and reviewed.

We request that you respond to this letter within 20 days of its receipt.

Very truly yours,

Michael J. Mikulka, Chief
Enforcement Unit II

C07305

CERRO COPPER PRODUCTS CO.
A member of The Marmon Group of companies
P.O. Box 681
East St. Louis, Illinois 62202
618/337-6000

October 14, 1986

Ms. Ann Weinert
U.S. EPA, Region V
230 S. Dearborn
Chicago, IL 60604

Dear Ms. Weinert:

Our letter of September 16, 1986 advised that data relating to the nature of our operations would be submitted by the end of September with available flow data not dependent upon the completion of the Phase II Study following by October 15. On September 29 we forwarded the requested documents covering the Nature of Operations and attached hereto are the above described appertaining flow data.

The five year history was derived from reports regularly submitted by the Sauget POTW. We believe these figures are higher than our actual flow and for a number of years we have been working with the POTW in an attempt to improve the validity of their method of measuring and calculating flows.

The flow tables incorporating regulated processes include data extracted from the initial compilations of our Phase II study. As we previously pointed out this Phase II study covers a very complex system and incorporates a very large data base which Patterson Associates, Inc. is in the process of rationalizing. Our flow data will be refined in the Phase II study and a more comprehensive set of data will be included in our next submission, on or before December 31, 1986 as represented in our September 16, 1986 letter.

Patterson Associates Inc. reports that they are on schedule with the Phase II study and we therefore expect to submit the requested information on Nature and Concentration of Pollutants, in addition to details of waste-water flows, by December 31, 1986.

Our September 29, 1986 submissions included a plant layout showing general locations of operating areas covered by the several categorical pretreatment standards. That layout included sample point locations which were later revised. Attached is a replacement print of the same layout with sample point designations conforming to the Phase II study.

CERRO COPPER PRODUCTS CO.
A member of The Marmon Group of companies

During our conference call on September 2 you mentioned that you plan to visit our facility in the near future. We are confident that visit would clarify much of what has been related to you in conversation and correspondence, and suggest that you contact us to arrange a mutually convenient time for the visit.

Very truly yours,

CERRO COPPER PRODUCTS CO.
A member of The Marmon Group
of companies

S. A. Silverstein
Manager of Energy and
Environmental Affairs

SAS/ge

Enclosures

bcc: Richard Kissel, Martin, Craig, Chester & Sonnenschein
Dr. James Patterson, Patterson Associates Inc.
Paul Tandler
File

C07310

CERRO COPPER PRODUCTS CO.

WASTEWATER FLOW DATA

TABLE I

Metal Molding & Casting - Copper Casting Subcategory

Direct Chill Casting	-	50 gpm (estimated)
Dust Collecting Scrubber	-	3.6 gpm

Non Ferrous Metals - Secondary Copper Category

51.5 gpm - (includes some non regulated flow)

Copper Forming

Main Tube Mill

Solution Heat Treat Miscellaneous Waste Streams	- 67.7 gpm

No. 2 Tube Mill

Hot Rolling Spent Lubricant Solution Heat Treat Pickling Bath Pickling Rinse Miscellaneous Waste Streams	17.5 gpm

(Distribution of streams under further study; some operations are intermittent, sewer network is extremely complex)

C07311

CERRO COPPER PRODUCTS CO.

WASTEWATER FLOW DATA

TABLE II

(Gallons per Minute)

	Metal Molding & Casting	Non Ferrous Metals	Copper Forming	Total Process	Measured Flow at Outfall	Deviation
East Sewer Outfall	0	51.5	67.7	119.2	110.6	- 8.6
West Sewer Outfall	53.6	0	17.5	71.1	100.1	+ 29.0

C07312

SEWER FLOW - TOTAL VOLUME BY MONTH ($G \times 10^6$)

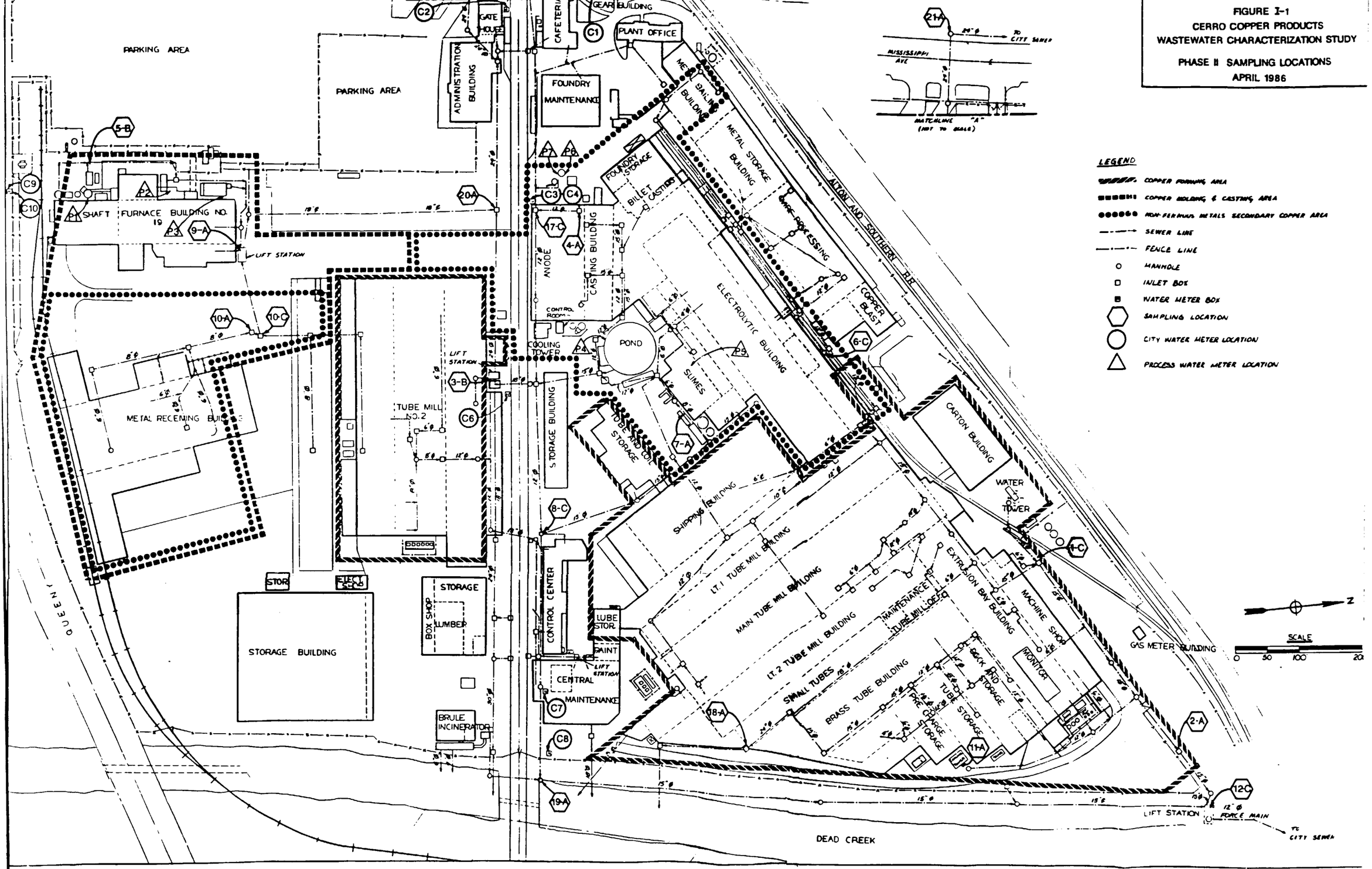
	East Outfall	West Outfall	Total to Sauget Plant
1982 - January	20.0	12.3	32.3
February	15.5	14.8	30.3
March	19.5	18.5	38.0
April	13.1	15.2	28.3
May	13.5	10.5	24.0
June	11.8	10.5	22.3
July	12.2	7.8	20.0
August	11.5	14.7	26.2
September	11.0	12.2	23.2
October	9.5	11.3	20.8
November	10.8	11.5	22.3
December	13.0	9.0	22.0
1983 - January	15.8	10.0	25.8
February	13.7	15.0	28.7
March	11.7	11.5	23.2
April	14.0	10.1	24.1
May	12.8	9.8	22.6
June	8.5	7.4	15.9
July	7.3	14.9	22.2
August	5.2	12.0	17.0
September	6.8	6.5	13.3
October	6.1	6.5	12.6
November	6.3	3.1	9.4
December	9.6	4.7	14.3
1984 - January	10.0	4.4	14.4
February	10.2	5.0	15.2
March	14.0	7.0	21.0
April	11.1	4.0	15.1
May	9.6	4.1	13.7
June	11.2	10.2	21.4
July	9.5	9.2	18.7
August	10.5	8.5	19.0
September	8.6	6.8	15.4
October	11.0	6.8	17.8
November	16.6	8.5	25.1
December	10.5	6.8	17.3

SEWER FLOW - TOTAL VOLUME BY MONTH (G x 10^6) con't.

	East Outfall	West Outfall	Total to Sauget Plant
1985 - January	17.5	12.0	29.5
February	16.3	14.0	30.3
March	14.8	13.1	27.9
April	12.0	13.0	25.0
May	9.9	16.3	26.2
June	4.3	14.7	19.0
July	2.6	6.8	9.4
August	18.0	7.4	25.4
September	14.4	4.0	18.4
October	18.0	4.7	22.7
November	14.4	4.5	18.9
December	14.4	6.0	20.4
1986 - January	8.8	3.6	12.4
February	7.0	2.0	9.0
March	12.0	4.0	16.0
April	21.2	4.4	25.6
May	4.5	3.9	8.4
June	9.4	3.5	12.9
July	7.6	6.3	13.9
August	6.3	6.3	12.6
September	6.2	5.6	11.8
October			
November			
December			

FIGURE I-1
CERRO COPPER PRODUCTS
WASTEWATER CHARACTERIZATION STUDY

PHASE II SAMPLING LOCATIONS
APRIL 1986



LEGEND

- COPPER FORMING AREA
- COPPER MOLDING & CASTING AREA
- IRON-FERROUS METALS SECONDARY COPPER AREA
- SEWER LINE
- FENCE LINE
- MANHOLE
- INLET BOX
- WATER METER BOX
- SAMPLING LOCATION
- CITY WATER METER LOCATION
- PROCESS WATER METER LOCATION

cc: RBoudler

30 SEP 1986

WWC-TUB-3

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

U.S. Corporation Co.
Registered Agent for
Cerro Copper Products, Co.
33 N. LaSalle Street
Chicago, IL 60602

Re: Cerro Copper Products, Co.
Pretreatment Regulations
Order Pursuant to 33 U.S.C.
Section 1319 (a)
Docket No. V-W-86-AO -41

Dear Gentlemen:

Enclosed herewith is the above-referenced Order.

Compliance with the terms of this Order is required within the time period specified in the Order. Compliance with the Order does not relieve the company from further enforcement action pursuant to Title 33 U.S.C. Section 1319.

If you have any questions concerning this matter, please contact Jerry Rogers at 312-886-6769. Please send your written responses to the addresses specified in the Order.

Sincerely yours,

Charles H. Sutfin
Director, Water Division

Enclosure

cc: James Park, Manager
Division of Water Pollution Control
IEPA

Thomas McSwiggin, Manager
Permit Section, IEPA

Kenneth Rogers, Manager
Compliance Assurance Section, IEPA

Richard Kissel, Attorney
Martin, Craig, Chester and Sonnenschein

S.A. Silverstein, Manager
Cerro Copper Products, Co.

C07331

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

IN THE MATTER OF: Cerro Copper Products, Co. East St. Louis, Illinois General Pretreatment Regulations PROCEEDING UNDER SECTION 309(a) of the CLEAN WATER ACT, 33 U.S.C. Section 1319(a)	DOCKET NO. V-W-86-AO-41 FINDINGS OF VIOLATIONS AND COMPLIANCE ORDER

The following FINDINGS are made and ORDER issued pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency (USEPA) by the Clean Water Act (CWA), 33 U.S.C. 1318 and 1319(a), duly delegated to the Regional Administrator, Region V, and duly redelegated to the undersigned Director, Water Division, Region V.

FINDINGS

1. Cerro Copper Products, Co., located in East St. Louis, Illinois, is an industrial user as defined in the General Pretreatment Regulations, 40 CFR 403, as a result of introducing pollutants into a publicly owned treatment works (POTW) operated by the Village of Sauget, Illinois.

2. The General Pretreatment Regulations, 40 CFR 403.12 requires an industrial user discharging to a POTW to submit a report to the Control Authority within 180 days after the effective date of a categorical pretreatment standard. This report is known as the Baseline Monitoring Report (BMR).

3. Since the Village of Sauget has not received approval for its pretreatment program, U.S. EPA, as the Approval Authority, is the Control Authority as set forth in 40 CFR 403.12(a).

4. Based upon information furnished by Cerro Copper, U.S. EPA has determined that Cerro Copper is subject to the following categorical pretreatment standards:

a. 40 CFR 468 (Copper Forming);

b. 40 CFR 421, Subpart F (Nonferrous Metal Manufacturing, Secondary Copper Category);

c. 40 CFR 464, Subpart A (Metal Molding and Casting, Copper Forming Category).

5. 40 CFR 468 became effective September 26, 1983. The BMR required by 40 CFR 403.12 was due March 25, 1984.

6. 40 CFR 421 became effective April 23, 1984. The BMR required by 40 CFR 403.12 was due October 20, 1984.

7. 40 CFR 464 became effective December 13, 1985. The BMR required by 40 CFR 403.12 was due June 11, 1986.

8. On April 4, 1986, Cerro Copper submitted to U.S. EPA copies of three Baseline Monitoring Reports they filed with the Illinois Environmental Protection Agency. One report was for the Copper Forming Category, a second report was for the Nonferrous Metals-Secondary Copper Category and a third report was for the Copper Molding and Casting Category.

9. In a letter dated July 29, 1986, U.S. EPA as the Control Authority, informed Cerro Copper, through its attorney, Richard Kissel of the firm Martin, Craig, Chester and Sonnenschein, that their April 4, 1986, reports were deficient and must be resubmitted with certain information if Cerro Copper was to be in compliance with 40 CFR 403.12. A copy of this letter is attached as Exhibit A to this Order.

10. To date, Cerro Copper has failed to submit the information necessary to comply with 40 CFR 403.12.

11. On September 16, 1986, Cerro Copper submitted a schedule to U.S. EPA which establishes specific time frames in which the information required by 40 CFR 403.12(b) can be provided to U.S. EPA. This schedule has been incorporated into the Order below.

12. The failure to submit the information required by 40 CFR 403.12 is a violation of the General Pretreatment Regulations and the Clean Water Act.

13. Section 309 of the Act; 33 U.S.C. §1319, authorizes the Administrator to issue a compliance order or to commence a civil action for appropriate relief to any person who is in violation of the Act.

ORDER

BASED ON THE FORGOING FINDINGS, and pursuant to the authority vested in the undersigned by Section 308 and 309(a)(3) of the Clean Water Act (33 U.S.C. §§1318 and 1319), IT IS HEREBY ORDERED that Cerro Copper Products, Co:

1. Comply with the General Pretreatment Regulations and the Clean Water Act by submitting the information required by 40 CFR 403.12(b) in accordance with the following schedule:

a. No later than October 15, 1986, the information required by 40 CFR 403.12(b)(3) Description Of Oper. Sent 9/29/86

b. No later than October 15, 1986, the information required by 40 CFR 403.12 (b)(4) Flow Data. Mon. Daily + Mon. Composite Supply By This Date

c. No later than December 31, 1986, the information required by 40 CFR 403.12(b)(5) Will Be Able To Supply Nature Of Pollutants

C07334

d. No later than December 31, 1986, the information required by 40 CFR 403.12 (b)(6) CONTINGENCY - CAN PROVIDE

e. No later than January 31, 1987, the information required by 40 CFR 403.12 (b)(7) and (c). COMPLIANCE PLAN SCHEDULE ? OPTIONS ON RESULTS OF PHASE II.

2. Shall provide a written report to the Chief, Compliance Section, (5WQC-TUB-8) U.S. EPA, 230 South Dearborn Street, Chicago, Illinois, 60604 and Chief, Compliance Assurance Section, IEPA 2200 Churchill Road, Springfield, Illinois 62706, within five (5) days, of any actions that are identified in the Order that have not been initiated or completed according to the schedule, along with an explanation as to why the actions have not been initiated or completed, and the earliest date the activity will be initiated or completed.

Neither the issuance of this Order by the U.S. EPA, nor compliance with this Order by Cerro Copper, shall be deemed to relieve Cerro Copper of liability for any penalty, fine, remedy or sanction authorized to be imposed pursuant to Section 309(b), (c) and/or (d) of the Clean Water Act, as amended, for any violation of the terms and conditions of the General Pretreatment Regulations and/or the applicable requirements of the Clean Water Act, including but not limited to any and all violations addressed in this Order. The U.S. EPA specifically reserves the right to seek any or all of the remedies specified in Section 309(b), (c) and/or (d) of the Clean Water Act for each and every violation cited in this Order.

Signed this 29th day of SEPTEMBER, 1986.

For Charles H. Sutfin
Director, Water Division
U.S. Environmental Protection Agency
Region V

C07335

5WQP

JUL 29 1986

Mr. Richard J. Kissel
Attorney at Law
Martin, Craig, Chester and Sonnenschein
115 South LaSalle Street
Chicago, Illinois 60603

Dear Mr. Kissel:

As agreed upon during the June 12, 1986, meeting between representatives of Cerro Copper and U.S. EPA Region V the following request is being made for information to correct deficiencies in your April 4, 1986, submission of Baseline Monitoring Reports (BMRs) for your plant located in Sauget, Illinois. Please refer to Attachment I to this letter for the information needed to correct the deficiencies and due dates for the requested material.

If Cerro or Patterson Associates, Inc., have any questions about what is required for the revised BMR submissions, please contact Anne Weinert, at (312) 886-6115.

Sincerely yours,

J. David Rankin
Regional Pretreatment Coordinator

Attachment

cc: Angela Tin, IEPA
Paul Tandler, Cerro Copper Products Company

EXHIBIT A

C07336

ATTACHMENT I

Cerro Copper, Sauget, Illinois submitted three BMRs on April 4, 1986, to fulfill the reporting requirements outlined in 40 CFR 403.12. Cerro indicated that they are subject to three National Categorical Pretreatment Standards (NCPS):

40 CFR 468	Copper Forming
40 CFR 421	Nonferrous Metal Manufacturing Subpart F - Secondary Copper Subcategory
40 CFR ~~468~~464	Metal Molding and Casting Subpart R - Copper Casting Subcategory

The submission for each BMR is deficient. Cerro must resubmit a BMR for each NCPS that includes the following information.

(1) Nature of Operations

List each operation, its production rates, applicable NCPS subparts, and appropriate SIC codes. Be specific in identifying each operation along with a 5 year production history in appropriate units. In addition, if other manufacturing processes not related to any of the subcategories exist, provide a general description of the other manufacturing operations. In order to provide a firm understanding of operations related flows and pretreatment facilities, submit a schematic of each process, associated flows and pretreatment system, if any. All drawings should be on material suitable for reproduction. They should be simple, but complete. Indicate on each schematic where samples were taken for each operation.

(2) Wastewater Flows

Provide total plant flow to the sanitary sewer and indicate how the flow is apportioned between the two connections to the sewer. Flows should be presented as a 5 year average daily and daily maximum flows for each source within the plant. The total plant flow should include domestic wastewaters, regulated operation wastewaters, cooling water plus any other manufacturing wastewaters. Indicate whether continuous or batch discharging is occurring. Provide average and maximum flows from each regulated operation. In some cases these wastewaters are combined. Please provide necessary information for use in the Combined Wastestream Formula (CWF).

(3) Nature and Concentration of Pollutants

Sample, analyze and report on all regulated pollutants specific to each process (refer to the appropriate subcategory in the regulations for regulated pollutants). The BAT pretreatment standards are process-relate That is, a facility must comply with the standard at the end-of-each regulated process. Minimum sampling requirements are:

Process flows < 250,000 GPD --- 3 samples within 2 week period.
Process flows > 250,000 GPD --- 6 samples within 2 week period.

These samples should be 24 hour flow proportioned composites representative of typical plant operations. If combined wastestreams are sampled, the categorical limits for each pollutant must be adjusted using the CWF. If the CWF is used, indicate the calculated limits.

(4) Compliance Certification

Include a statement reviewed by an authorized representative indicating whether NCPS are being met on a consistent basis and if not whether additional operation and maintenance and/or pretreatment is required to meet NCPS.

(5) Compliance Schedule

If additonal measures must be taken to meet NCPS include the schedule proposed to meet each NCPS. Please reference the Pretreatment Standards for Existing Sources (PSES) compliance dates below:

NCPS	Effective Date	PSES Compliance Date
468	09/26/83	08/15/86
421	04/23/84	03/09/87
464	12/13/85	10/31/88

Based on information provided in the June 12, 1986, joint meeting, material to satisfy the deficiencies should be available for submission from Cerro on the following dates:

Material To Be Provided	Date Due
Nature of Operations, Wastewater Flows	08/22/86
Nature and Concentration of Pollutants, Compliance Certification	10/15/86
Schedule of Compliance	03/30/87

Following are some general concerns regarding the submission of the requested information:

(A) Nature of Operations. The required schematic for each NCPS should indicate only those locations and operations specific to that category (i.e., submit three different schematics). Please also include a composite of entire plant showing all processes. Also, as these NCPS are production based, it is essential that average production data be included.

(B) Wastewater Flows. The sewer flow study detailed in the work plan should show outfalls and flows from each. It is acceptable for the first submission to include the flow data with the pollutant data to follow on October 15, 1986.

CERRO COPPER PRODUCTS CO.
A member of The Marmon Group of companies
P.O. Box 681
East St. Louis, Illinois 62202
618/337-6000

September 29, 1986

Ms. Ann Weinert
United States Environmental
Protection Agency
Region V
230 South Dearborn Street
Chicago, IL 60604

Dear Ms. Weinert:

Pursuant to our letter of September 16, 1986 enclosed herewith are the following documents:

1. Listing of our principal operations, including classifications and five year history.

2. General description of our operations at this facility.

3. Schematics of each of the processes subject to national categorical pre-treatment standards.

4. Plant layout with designations appertaining to above.

This data is supplemental to previously submitted base line monitoring reports and additional submissions will follow pursuant to the aforementioned September 16 letter.

Very truly yours,

CERRO COPPER PRODUCTS CO.
A member of The Marmon Group
of companies

S. A. Silverstein
Manager of Energy and
Environmental Affairs

SAS/ge

Enclosures

bcc: R. Kissel
J. Patterson
P. Tandler
File

C07339

NATURE OF OPERATIONS

OPERATION	PRODUCTION RATE LBS./DAY	NCPS SUBPART	SIC CODE	PRODUCTION (Millions of Pounds) 1981	1982	1983	1984	1985
Reverb Billet Furnace	440,000	Metal Molding & Casting	3351	85.8	79.9	108.0	110.7	115.1
Billet Casting	600,000	Metal Molding & Casting	3351	170.3	160.8	196.6	222.0	226.2
Billet Sawing	600,000	Metal Molding & Casting	3351	154.8	146.2	178.7	201.8	205.6
Extrusion	900,000	Copper Forming	3351	154.0	146.3	176.0	202.3	201.6
Piercing, Pickling, Rinse	100,000	Copper Forming	3351	.69	.93	1.27	1.32	1.61
Cold Drawing	850,000	Copper Forming	3351					
Finishing	800,000	Copper Forming	3351	125.4	120.2	146.5	168.1	167.0
Annealing	300,000	Copper Forming	3351					
Anode Furnace	580,000	Non-Ferrous Metal	3331	122.0	122.0	112.0	113.1	137.1
Anode Casting	535,000	Non-Ferrous Metal	3331	111.9	112.0	101.1	103.3	124.5
Electrolytic Refining	300,000	Non-Ferrous Metal	3331	94.9	91.5	86.9	83.9	95.9
Slimes Processing	1,500	Non-Ferrous Metal	3331	.44	.52	.42	.40	.43
Metal Receiving	N.A.	Metal Molding & Casting	3351 & 3331	198.3	187.2	189.7	223.9	229.0
Bricking	N.A.	Non-Ferrous Metals	3331	142.9	149.8	159.4	183.7	173.5

C07340

DESCRIPTION OF OPERATIONS

The Cerro Copper Products Co. plant is located on an approximately 64 acre site in the Village of Sauget, Illinois. Plant operations are generally identified in three separate classifications: Casting, electrolytic refining, and fabrication. Plant products are electrolyte copper cathode and copper tubing. Employment is in the range of 750.

The casting operations are carried out in three furnaces, two of which are reverberatory type and the third is an Asarco shaft furnace. One of the reverberatory furnaces, called an Anode Furnace, is charged with high grade copper scrap, melted in the furnace, fire refined and cast into a shape to serve as anodes for the electrolytic refinery. The furnace has a nominal capacity of 250 tons and normally operates on a five day per week schedule.

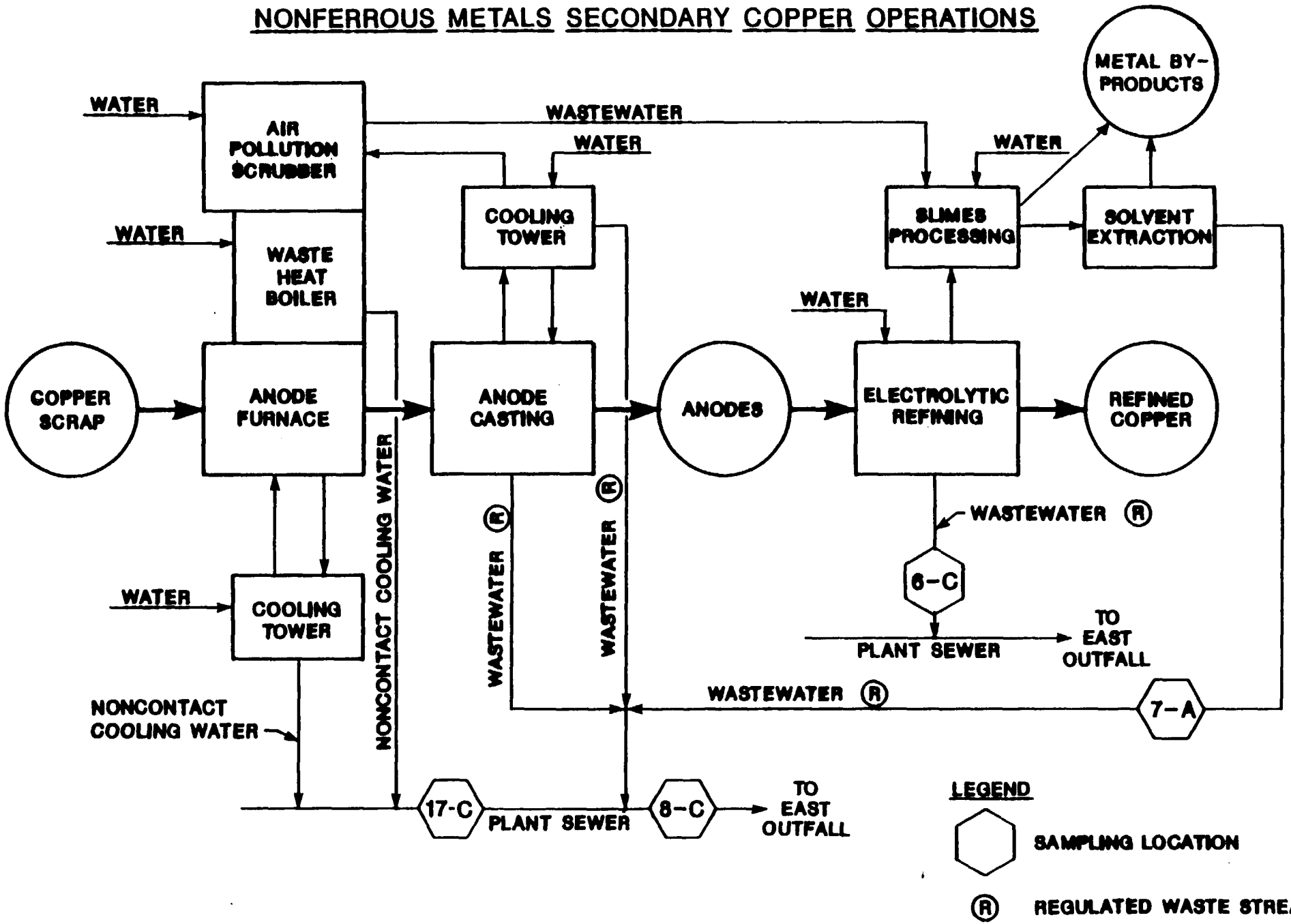
The other reverberatory furnace and the shaft furnace both feed a pair of semi-continuous casting machines in which copper is cast into 12-1/2" diameter logs, 35' in length. The logs are subsequently cut into 25" lengths as billets for the extrusion operation in the Tube Mill. The reverberatory furnace which feeds the billet casting operation has a nominal capacity of 250 tons and is charged with high grade copper scrap, blister copper, and similar quality material which is suitable for fire refining to yield metal of a quality suitable for tube production. The shaft furnace feeding the billet casting operation is a continuous melting device with a through-put rating of 30 tons per hour; it is charged with cathode copper and the equivalent quality scrap.

The electrolytic refinery has a nominal capacity of 44,000 tons per year. The refinery has 580 plating cells connected in series and supplied by a 10,000 amp silicon rectifier unit. Copper anodes are placed in the cells alternately with copper starting sheets along with an electrolyte solution which is basically 10% sulphuric acid. The electrolyte solution is continuously recirculated through the cells from a reservoir which contains stainless steel steam coils which are used to maintain the proper temperature of the electrolyte. Copper from the anode is plated onto the starting sheet and after a 14-day cycle the sheets are removed as completed copper cathode. Impurities contained in the anode drop to the bottom of the cell during the plating operation and collect there as slimes. Periodically the slimes are pumped from the cells to a processing area where they are prepared for shipment to outside resources for further refinement.

Tube Mill operations begin with an extrusion operation wherein copper billets are heated and extruded in a 5750-ton hydraulic press which transforms the billet into a tube approximately 3" diameter by 220' long. The tubes are then reduced in diameter and wall thickness by a series of drawing operations until the desired size is attained. The drawing operations are performed on a series of bull blocks which are powered capstans with a gripper which engages the end of the tube and pulls it through a die and over a floating mandrel, thereby reducing both diameter and wall thickness in a prescribed manner. When the tube is drawn to the required size, it is then processed to either straight length or coil form preparatory to shipment. For straight lengths, the coils of tube are passed through a multi-roll straightener, electronically tested for defects, identification marked with size, type and manufacturer's name, and cut to prescribed lengths. Straight lengths are bundled in uniform quantities and delivered to storage awaiting shipment as required.

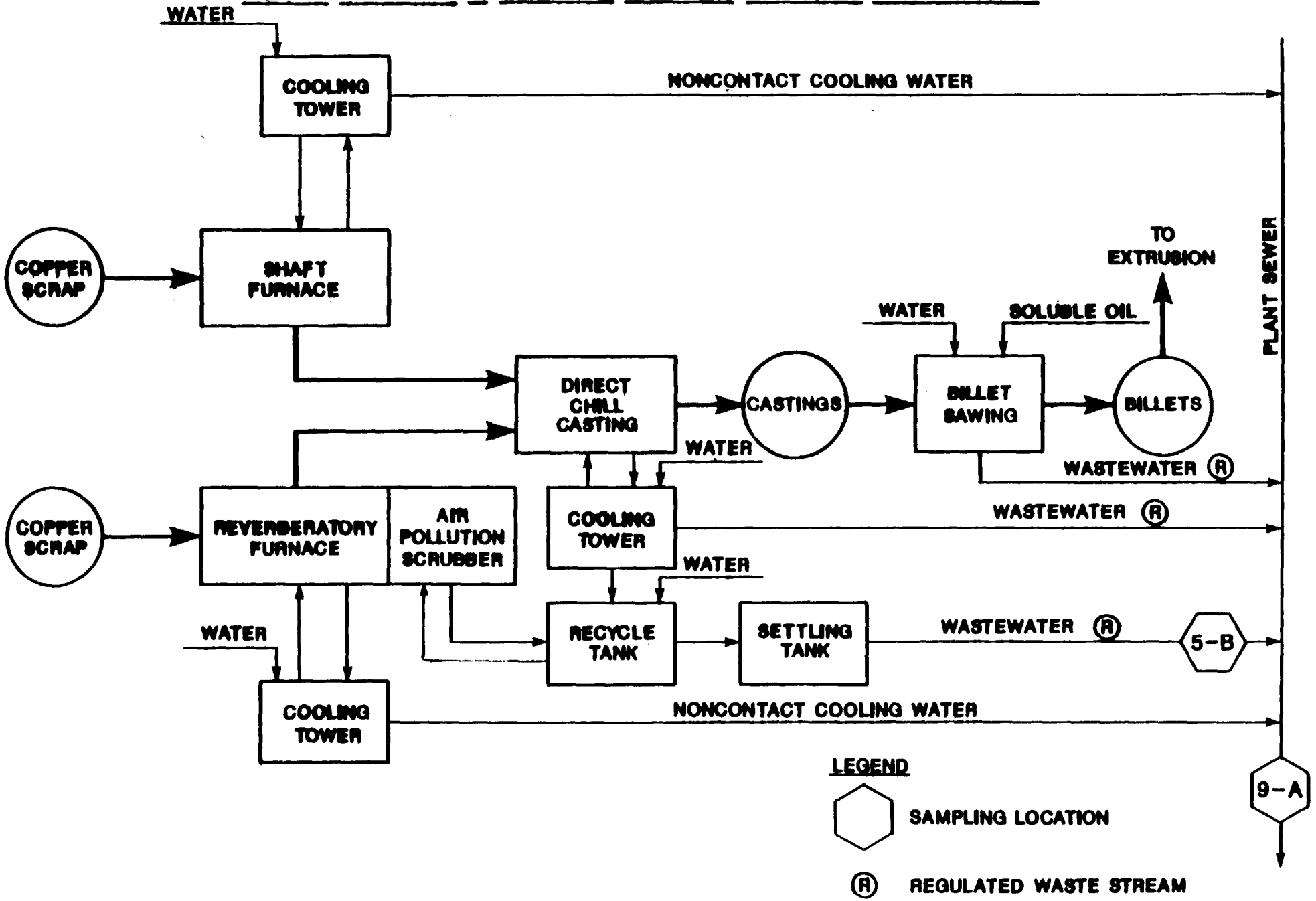
Tubing which is to be shipped in the form of annealed coils is processed through a group of tube coilers which forms the tube into the required pattern, electronically tests for defects and cuts off the prescribed length. Coils thus prepared are processed through one of several roller hearth annealing furnaces from which they are individually packaged in cartons preparatory to shipment.

CERRO COPPER PRODUCTS COMPANY
PROCESSING FLOW DIAGRAM
NONFERROUS METALS SECONDARY COPPER OPERATIONS



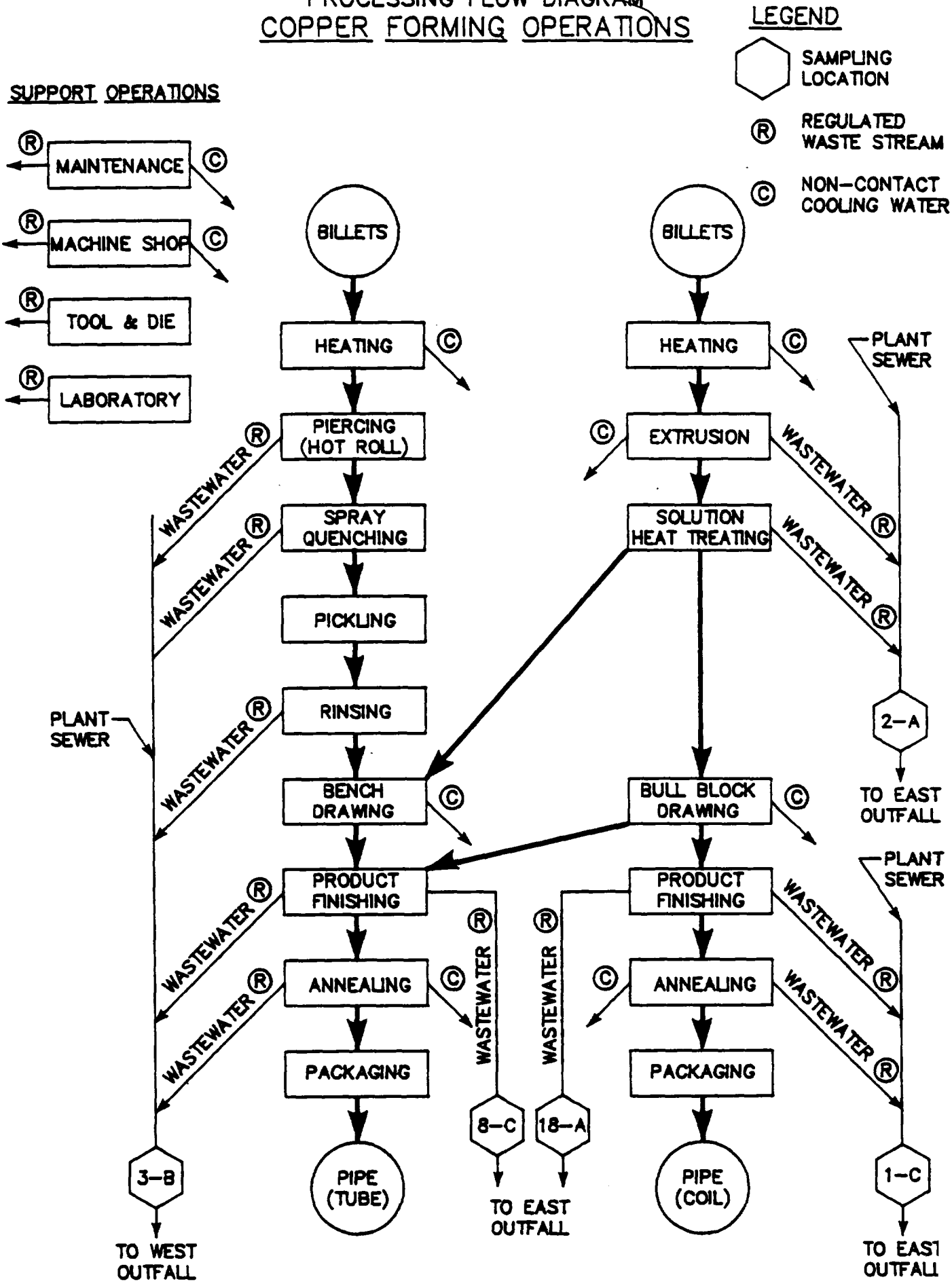
C07343

CERRO COPPER PRODUCTS COMPANY
PROCESSING FLOW DIAGRAM
METAL MOLDING & CASTING COPPER CASTING OPERATIONS

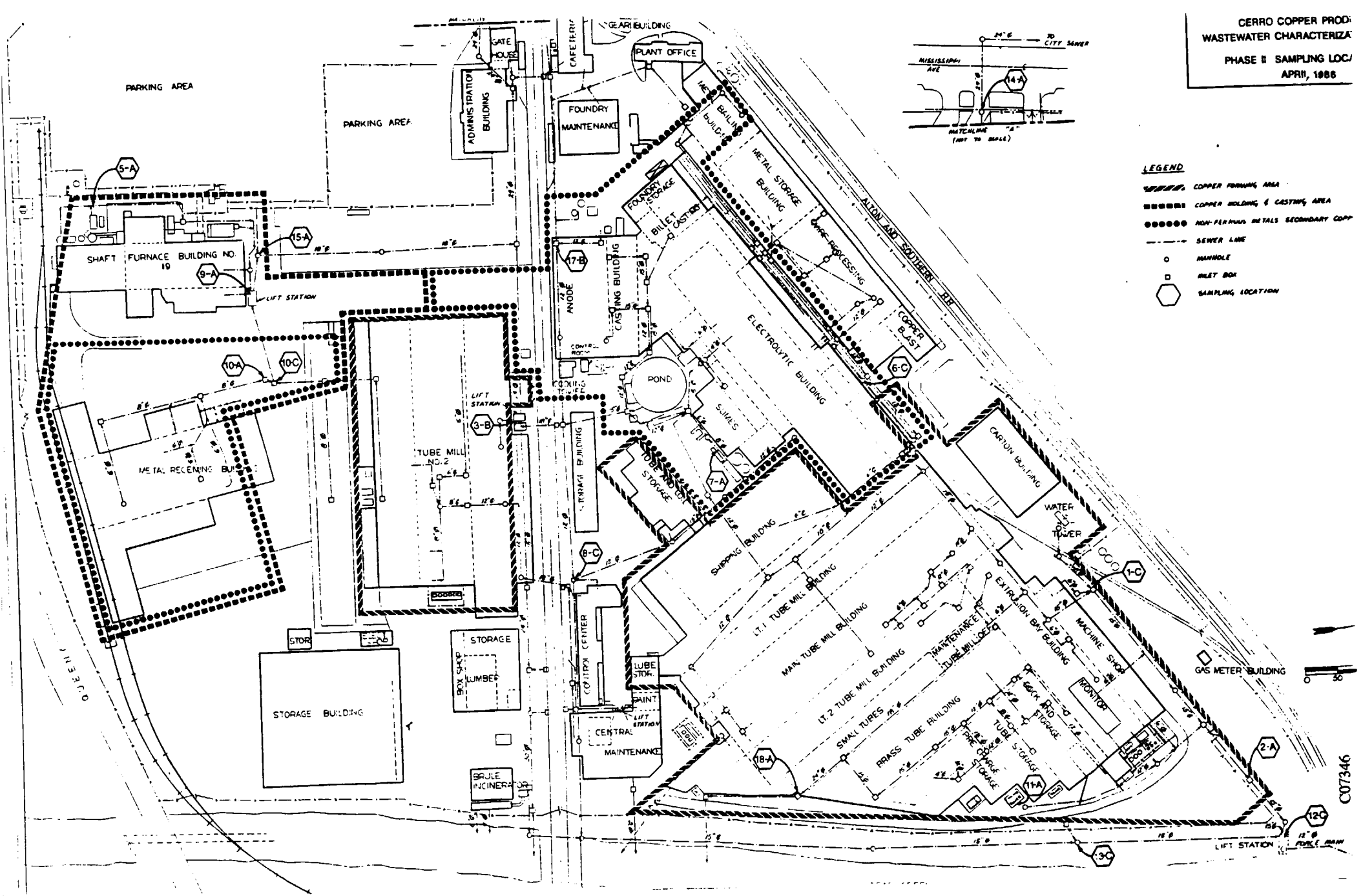


C07344

CERRO COPPER PRODUCTS COMPANY
PROCESSING FLOW DIAGRAM
COPPER FORMING OPERATIONS



C07345


CERRO COPPER PROD
WASTEWATER CHARACTERIZA
PHASE II SAMPLING LOC
APRIL, 1986
LEGEND
COPPER FORMING AREA
COPPER MOLDING & CASTING AREA
NON-FERROUS METALS SECONDARY COPP
SEWER LINE
MANHOLE
INLET BOX
SAMPLING LOCATION
PARKING AREA
PARKING AREA
ADMINISTRATION BUILDING
GATE HOUSE
GEAR BUILDING
PLANT OFFICE
FOUNDRY MAINTENANCE
METAL STORAGE BUILDING
ALTON AND SOUTHERN RR
FOUNDRY STORAGE
BILLET CASTING
SHAFT FURNACE BUILDING NO. 19
LIFT STATION
ANODE CASTING BUILDING
SCRAP PROCESSING
COPPER BAST
ELECTROLYTIC BUILDING
POND
SLIMES
TUBE MILL NO. 2
METAL RECEIVING BUILDING
TUBE ANNEAL STORAGE
CARTON BUILDING
WATER TOWER
SHIPPING BUILDING
LT. 1 TUBE MILL BUILDING
MAIN TUBE MILL BUILDING
LT. 2 TUBE MILL BUILDING
SMALL TUBES
BRASS TUBE BUILDING
MAINTENANCE
TUBE MILL LOCKER
EXTRUSION BAY BUILDING
MACHINE SHOP
FRONTOOR
GAS METER BUILDING
STORAGE BUILDING
STORAGE
BOX SHOP
LUMBER
COMPTON CENTER
LUBE STOR.
PAINT
CENTRAL MAINTENANCE
SAUE INCINERATOR
LIFT STATION
C07346

CERRO COPPER PRODUCTS CO.
A member of The Marmon Group of companies
P.O. Box 681
East St. Louis, Illinois 62202
618/337-6000

March 23, 1984

Mr. Charles H. Sutfin
U. S. EPA Regional Water
Division Director

RE: Application For Fundamentally Different Factors ("FDF") Variance
Subcommitted by Cerro Copper Products Co. and the Village of Sauget

Dear Sirs:

This is an application for a variance from the National Discharge Limitations established for copper forming point source categories ("copper forming limitations") which were adopted by the U. S. Environmental Protection Agency ("U.S.EPA") and published in Volume 48 of the Federal Register, pages 36942 et seq., on August 15, 1983, insofar as such limitations may be applicable to the Cerro Copper Products Co. (hereinafter called the "Cerro plant") plant located in Sauget, Illinois. In our opinion, this request fulfills the criteria set forth in Title 40 C.F.R. Sec. 403.13 as follows:

(1) factors relating to the discharges from the Cerro plant are fundamentally different from those considered by the U.S.EPA in establishing the national limits, as will hereinafter be explained.

(2) the request for alternative effluent limitations or standards is made pursuant to Title 40 C.F.R. Sec. 403.13 and in accordance with the procedural requirements of the same section.

For the reasons which are hereinafter set forth in detail, we believe: (a) that the alternative effluent limitation or standard requested is no less stringent than justified by the fundamental differences which are described; (b) the alternative effluent limitation or standard will ensure compliance with Sec. 307 of the Clean Water Act; and (c) compliance with the national limits will result in a removal cost (estimated to be in excess of $6 million) which is wholly out of proportion to the removal cost considered in development of the national limits.

The factors which, in our view, may be considered under Title 40 C.F.R. Sec. 403.13 as fundamentally different in the situation affecting the Cerro plant are:

(1) the age, size, land availability and configuration as they relate to the discharge equipment or facilities; processes employed; process changes and engineering aspects of the application of control technology; and

(2) the cost of compliance with required control technology. Set forth in Appendix A is a full discussion of the fundamentally different factors and how they relate to operations at the Cerro plant.

For the reasons set forth above, and in Appendix A, we request the following as a variance from the copper forming regulations:

> The treatment facility of the Village of Sauget is a pretreatment facility, as that term is used in the Clean Water Act and the regulations promulgated thereunder, for Cerro Copper Products Co. which discharges to said treatment facility. Therefore, Cerro shall be deemed in compliance with all copper forming pretreatment standards as long as the Sauget pretreatment facility is in compliance with all applicable water quality standards; provided, however, that no interference or pass-through of pollutants from the copper forming subcategory shall occur.

The reasons why we believe this variance is appropriate are more fully set forth and described in Appendix B.

In order to provide sufficient factual data as to why the foregoing factors are fundamentally different in the present circumstances, we have attached for your reference detailed explanatory and supporting materials in the following described exhibits:

1. Exhibit I - description and flow diagram of existing water treatment facility and processes at the Sauget POTW.

2. Exhibit II - Regional Treatment Facility Flow Diagram.

3. Exhibit III - (a) correspondence Charles Suftin of U.S.EPA to Jack Molloy of Monsanto; (b) correspondence dated September 28, 1982 from Gary King of Illinois EPA to Richard J. Kissel.

4. Exhibit IV - Flow diagram for PSES system.

5. Exhibit V - Flow diagram for existing Cerro Copper Products facility.

6. Exhibit VI - Influent/Effluent charts regarding prescribed technology efficiency.

7. Exhibit VII - Summary of estimated costs of compliance.

Appendix A and B, together with the exhibits attached to this letter are incorporated by reference and made a part of this application as if fully set forth herein.

We believe the foregoing materials are fully supportive of this application and we ask that favorable consideration be given to our request for a variance from the copper forming limitations on the basis of the fundamentally different factors described herein.

Very truly yours,

CERRO COPPER PRODUCTS CO.
A member of The Marmon Group
of companies

Paul Tandler
Vice President - Manufacturing

PT/ge

APPENDIX A

The fundamentally different factors which justify a variance from the national limitations and the reasons why a variance is appropriate with respect to the Cerro plant operations are described in this appendix.

1. Processes employed, process changes, and engineering aspects of the application of control technology. (40 C.F.R. §403.13(d)(5))

The Cerro plant is located on an approximately 64-acre site in Sauget, Illinois. Plant operations are generally identified in three separate classifications: casting, electrolytic refining and fabrication. Cerro products include electrolyte copper cathode and copper tubing. The plant employs approximately 750 persons. Cerro discharges cooling water and process wash water to the Village of Sauget Publicly Owned Treatment Works ("POTW"), after primary settling at the Cerro plant.

The Sauget POTW is a physical/chemical treatment plant that was designed for the treatment of complex industrial wastewaters.* It started operation in 1966 as a primary

*A 1970 study to analyze the characteristics of Sauget wastewater and to develop a proposal for an advanced wastewater treatment plant demonstrated that the most cost-effective and efficient means of treating the discharge from the various Sauget industries was combined chemical treatment at the Sauget POTW. Individual treatment by each industry was also examined but rejected because it was far more costly than combined treatment. Thus, it is clear that the present Sauget POTW was intended to be the pretreatment facility for each of the five Sauget industries.

plant. In 1977, a new facility was completed which, in addition to upgrading the pre-existing facility for removal of scum and oil, provides for neutralization of acidity, precipitation and removal of heavy metals, and lagooning of stormwaters. (See Exhibit I for detailed description and schematic of Sauget treatment plant.) Ninety-eight to ninety-nine percent of the Sauget POTW's influent is from five large industries which are generally operating three shifts per day, seven days per week. The other one or two percent is municipal waste from Sauget's population of 200.

Presently, the Sauget POTW discharges into the Mississippi River. However, within five years the Sauget POTW will begin discharging to a regional treatment plant providing additional biological treatment for BOD, suspended solids, oil and phenol. Like the Sauget POTW, the regional facility was designed to treat complex industrial waste. (See Exhibit II for regional treatment plant schematic.)

The Village of Sauget undertook to design, construct and operate the regional wastewater treatment facility at the suggestion of the Southwestern Illinois Metropolitan Area Planning Commission which indicated that effective secondary wastewater treatment for St.Clair and Madison Counties could be provided through the development of a regional treatment facility.

Cerro and the other local industries have agreed to provide funding guarantees for the regional plant in

order to finance the $42 million local share bond issue. The basis for such a commitment by these industires was that the Sauget POTW and the regional treatment plant would be deemed to constitute the required pretreatment facilities for the contributing industries under the various categorical guidelines, including the copper forming guidelines under consideration here. Indeed, the regional facility was designed specifically to handle industrial, as well as municipal, waste.

As early as 1973, the U.S.EPA and Illinois EPA were aware of and supported the development of the regional plant. Furthermore, since November 24, 1982, Sauget and the U.S.EPA have discussed in detail whether pretreatment by industries located in Sauget was necessary in light of the removal capabilities of the Sauget POTW and the regional treatment facility. U.S.EPA has assured both Cerro and Sauget that they did not intend to require pretreatment facilities for contaminants treated by the existing Sauget POTW and to be treated by the regional plant. Likewise, U.S.EPA has assured Cerro and Sauget that the regulations were not intended to be applied to jeopardize the operation of the Sauget POTW and the regional wastewater treatment plant.

Thus, Cerro and Sauget are in a clearly unique position. Both Illinois and U.S.EPA have recognized this. In a letter dated August 4, 1982 from Charles Sutfin of U.S.EPA to Jack Malloy of Monsanto, the Agency indicated that it was

"very interested in the Regional Treatment Plant being constructed. We feel the new plant will have the capability to remove and treat some of the toxicants which are presently entering the Village of Sauget's treatment plant. Also, the Sauget physical/chemical treatment facility provides a unique pretreatment feature that coordinates industrial pretreatment with the regional wastewater facility. (emphasis added).

The Illinois EPA concurred in Mr. Sutfin's position in a September 28, 1982 letter from Gary P. King of Illinois EPA to Richard J. Kissel, counsel for Sauget and Cerro. (These letters are attached hereto as Exhibit III.) Despite the U.S.EPA's interest in the development of the regional facility, Cerro, an industrial user of that facility, is to be subject to more stringent mathematically based copper forming limitations than other facilities merely because its wastewater is combined with that of other industrial users before treatment.

a. Removal Credits

Under Section 307(b)(1) of the Clean Water Act, a POTW is given authority to revise the categorical limits for its industrial users to reflect the removal of regulated pollutants by the POTW where such POTW "removes all or any part of such toxic pollutant and the discharge from such works does not violate that effluent limitation or standard which would be applicable to such toxic pollutant if it were discharged by such source other than through a publicly owned treatment works..." (33 U.S.C. §1317(b)(1)). The Agency has purported to provide the formula by which POTWs may revise the categorical limits in 40 C.F.R. §403.6(c)(4)(i) ("removal credits scheme"). However, we must point out

that application of the removal credits scheme in the present circumstances would be inconsistent with the statutory mandate in Section 307(b)(1).

Rather than affording industrial users of a POTW relief from the copper forming pretreatment standards, application of the removal credits scheme imposes an onerous burden upon the industries and municipalities alike. By use of a "combined wastestream" concept, the removal credit scheme fails to account for efficiently designed wastewater treatment systems in municipal/industrial settings. For example, if the removal credits scheme were applied by Sauget's POTW to give "relief" to one of its industrial users whose effluent includes copper, the following would result:

> The physical/chemical system of the Sauget POTW treats copper to 0.5 mg/l near its solubility level. This is the present effluent limitation of the POTW's NPDES permit. By using a solubility system, and by adjustments of chemicals and pH, the POTW can reduce the influent concentrations of copper to 0.5. In the removal ratio formula, $\frac{I-E}{I} = 4$, (proposed 403.7(b)(2)(iv))* the effluent concentration E for the Sauget POTW is 0.5 mg/l. The second element of the removal ratio is I, the influent concentration to the POTW. In the instance of a copper discharge to the Sauget POTW, the concentration could be 10 mg/l at the industrial discharge, but be 2 mg/l at the influent to the POTW. Therefore, I is 2 mg/l. Using the removal

*The currently applicable removal credit scheme does not provide a formula for determining the removal ratio, however, the definition of removal rate in 40 C.F.R. §403.7(a) is based on the ratio of influent and effluent levels. Thus, the proposed formula appears to simply implement the previous definition of removal rate.

ratio formula, the removal ratio is 75%, even though the initial discharge of copper was at a strength of 10 mg/l. When the removal ratio is applied to obtain the revised pretreatment standard using the formula $Y = \frac{X}{1-A}$, the effect is obvious. If the pretreatment standard is 0.5 mg/l, then the revised pretreatment standard is 2 mg/l.

For the Sauget industry, pretreatment to 2 mg/l would be required, even though the POTW is specifically designed to remove copper to 0.5 mg/l from the industry's discharge of 10 mg/l of copper. Indeed, the Sauget POTW utilizes a treatment technology for removal of heavy metals which exceeds the prescribed technology for copper forming facilities. (Compare Exhibit I with Exhibit IV, flow diagram for PSES system.) Cerro and the other Sauget industries, which constitute 99% of the influent to the Sauget POTW, will be required to perform the same level of treatment twice. Thus, the alternative concentration limits developed by applying the removal credits scheme result in mathematically based limitations bearing no relation to the removal capability of the Sauget POTW.* This was not the congressional intent expressed in Section 307(b)(1) of the Clean Water Act.

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*Comments to this effect were provided to the U.S.EPA in a letter dated February 21, 1983, addressed to Mr. Ernst P. Hall in the Effluent Guidelines Division. However, these comments are not reflected in the final development document. In its copper forming comment summary and response to the issue which were specifically raised by Cerro, the U.S.EPA stated that "[t]he standards being promulgated establish national pretreatment standards. Issues relating to individual POTWs are not addressed by this rulemaking."

As U.S.EPA itself has recognized, the relationship between Cerro and Sauget is clearly unique as to the equipment, facilities and processes employed in water treatment operations. (See Exhibit III.) Furthermore, the alternative copper forming limits to be imposed upon Cerro by the application of the removal credits formula are more, rather than less, stringent. For these reasons, we believe that it is appropriate for a fundamentally different factors variance to be granted in the present circumstances.

b. Combined Wastestream Formula.

The preamble to the final copper forming regulations describes the processes ancillary to basic copper forming operations which are to be regulated. These processes were chosen because the wastestreams they produce contain significant amounts of pertinent pollutants. These ancillary operations include, inter alia, hot rolling, cold rolling and drawing. 48 Fed. Reg. 36942 at 36944-5. However, other ancillary wastestreams, including boiler blowdown and non-contact cooling water likewise contain significant levels of regulated pollutants.

Although these wastestreams, which were not considered in the development of the copper forming limits, are not ordinarily treated as fundamentally different, we would like to emphasize that to the extent that these ancillary wastestreams must be factored out of the effluent composition computation, any application of the combined wastestream

formula* will have a serious impact on the ability to comply with the copper forming limitations at the Cerro plant.

Ancillary wastestreams such as boiler blowdown, non-contact cooling water, and other utility and sanitary wastestreams are as much a necessary part of facility operations as those ancillary streams which the Agency has chosen to regulate under copper forming guidelines. (See flow diagram for existing Cerro plant attached hereto as Exhibit V.) These wastewaters contain regulated pollutants and are amenable to treatment by the same processes used to treat other copper forming wastewaters. Moreover, they can be beneficial to those processes in terms of pollutant removal efficiency and reduction of the amount of treatment chemical required.

When the combined wastestream formula is applied in these circumstances, serious problems of compliance with the copper forming limitations arise. Because the non-contact cooling water, boiler blowdown and sanitary wastestreams are not among the regulated ancillary wastestreams, they are defined as "dilute" for purposes of applying the combined wastestream formula. While the basic assumption underlying the combined wastestream formula is that dilute streams contain no pollutants, Cerro's so-called "dilute" streams do contain pollutants. Since the formula provides for the

---

*Because the wastestreams at the Cerro facility are combined prior to treatment, Cerro must apply the combined wastestream formula (40 C.F.R. §403.7) to the copper forming industry categorical limits to obtain an alternative numerical limitation.

limitation to become more stringent in proportion to dilution, the resultant limits are simply technically unattainable.

Furthermore, application of the combined wastestream formula imposes unnecessarily stringent effluent limits. As the proposed development document suggested, most effluent pollutant levels are relatively independent of the influent levels over a wide range of influent concentrations. (See Figures VII-11 through VII-19 attached hereto as Exhibit VI).* This is because the metal concentration in solution is limited by its equilibrium solubility. If pH is controlled within optimum limits, then effluent concentrations are determined by an equilibrium solubility and the hydraulics of the treatment system. Influent concentrations have only a minor effect at a very high and low concentration. For example, when influent concentrations are below the equilibrium solubility limits at the operating pH, then none of the metals in the influent will precipitate out and the effluent concentration will vary with the influent concentration. At concentrations above the equilibrium solubility limit, flocculation and hydraulics then determine the efficiency of removal of only the precipitated metallic hydroxide. Very high concentrations may cause hindered settling thus producing unacceptably high concentrations of suspended metallic hydroxides in the effluent. Thus, a well operated

---

*The proposed development document referred to plots of raw waste concentrations versus effluent concentration which were generated for cadmium, chromium, copper, lead, nickel, aluminum, zinc, mangenese, iron and total suspended solids.

plant will produce the same concentration of metallic hydroxides in the effluent (within relatively narrow limits) regardless of the influent concentration (within relatively broad limits). If ancillary flows are added to the system before treatment then these flows will not generally cause a decrease in the effluent metals concentration, unless the influent concentration is below the solubility limit for the various metallic hydroxides at the operating pH. Obviously then, factoring out these ancillary flows by way of the combined wastestream formula may impose unnecessarily stringent effluent limitations on a plant utilizing an otherwise well operated treatment system.

As a result, we believe that the methodology used by U.S.EPA to establish national limits in the development document did not adequately recognize the nature or character of some of the ancillary flows necessary to support the forming which occurs at copper forming plants. Since ancillary flows such as boiler blowdown and non-contact cooling water play such an important part in the Cerro plant operations, we believe that it is appropriate for a fundamentally different factors variance to be granted in the present circumstances.

2. Cost of Compliance. (40 C.F.R. §403.13(d)(6)

Although the waste treatment technology installed at the Sauget POTW was intended to treat the combined waste from five different Sauget industries and despite the fact that the technology utilized by the Sauget POTW exceeds the prescribed technology for the copper forming regulations,

Cerro cannot, without substantial additional expenditures, achieve the copper forming limitations which are applied using the removal credits scheme and/or the combined wastestream formula.

In the text of the regulations published in the Federal Register on August 15, 1983, the U.S.EPA stated that the 45 indirect dischargers "will share investment costs of $9.2 million and annual costs of $7.7 million, including depreciation and interest." 48 Fed. Reg. 36942 at 36949. (emphasis added).

However, we estimate that minimum expenditures in excess of $6 million would be necessary to enable the Cerro facility to meet the copper forming regulations. (See Exhibit VII). This means that Cerro alone will have to expend two-thirds of what the Agency has estimated to be the capital expense for the entire group of indirect discharging facilities covered by the copper forming regulations. Moreover, it must be emphasized that these are minimum anticipated expenditures which would not necessarily assure that all of the copper forming limitations would be met. The only practical method for assuring complete fulfillment of all such limitations would be separation of all of the existing plant sewer systems and providing separate treatment for each of the regulated and unregulated wastestreams from the differing plant operations. It is not possible at this time to state with any certainty what this total expenditure might be, but clearly it would be substantially more than

the above minimum estimate.

Of course, the primary reason for the discrepancy between the Agency's estimated costs and the Cerro situation is that Cerro would have to install a complete wastewater treatment facility. In the past, it contributed financially to both the development of the Sauget and the regional treatment facilities because such facilities were built to treat industrial wastes and were deemed to be industrial pretreatment facilities.

For these reasons, we believe that it is appropriate for a fundamentally different factors variance to be granted in the present circumstances.

APPENDIX B

DISCUSSION AND JUSTIFICATION OF PROPOSED VARIANCE

The Sauget wastewater treatment facility currently has a recently publicly noticed NPDES permit with the following limitations:

Constituents	Daily Max.	Daily Average
BOD		200
Suspended Solids		60
Oil and Grease		45
Copper	1	.5
Mercury	.0046	.0026
Lead	7.8	.2
Nickel	2.68	1
Zinc	2	1
Iron	4	2
Phenol		15
pH		6-10

The U.S.EPA has proposed technology based standards for the copper forming industry. The technology which EPA considered was chemical precipitation followed sedimentation or clarification. Since waste treatment process utilized by Cerro is fundamentally different (as outlined in Appendix A) from the control scheme proposed by the copper forming regulations, the U.S.EPA should issue a variance for that facility.

The limit should be technology based as much as possible. For those constituents which are already in the existing Sauget NPDES permit - oil and grease, copper, nickel, lead, and zinc, the current limits should remain unchanged since they reflect the performance of the existing equipment.

These limits are based on existing technology and operation at the Sauget POTW. The remaining constituent, chromium, is not regulated by the existing permit. However, the Illinois effluent standards contain a chromium limitation which must be met. 35 Ill. Admin. Proc. §304.124. Therefore Cerro's variance should read:

> the treatment facility of the Village of Sauget is a pretreatment facility, as that term is used in the Clean Water Act and the regulations promulgated thereunder for Cerro Copper Products Co., which discharges to said treatment facility. Therefore, Cerro shall be deemed in compliance with all copper forming pretreatment standards as long as the Sauget pretreatment facility is in compliance with all applicable effluent limitations; provided, however, that no interference or pass-through of pollutants from the copper forming subcategory shall occur.

SECTION II - DESCRIPTION OF VILLAGE OF SAUGET PHYSICAL-CHEMICAL WASTEWATER TREATMENT FACILITY([2])

Summary

The facility at Sauget, Illinois is owned by the Village of Sauget and operated by a non-profit corporation, the "Sauget Sanitary Development & Research Association". See Figure 1 for Treatment Plant Schematic. Sauget's treatment facility started operation in 1966 as a primary plant. In February, 1974, ground was broken for new facilities which were completed in 1977. The new facility, in addition to upgrading the facilities for removal of scum and oil, provides for neutralization of acidity, precipitation and removal of heavy metals, and lagooning of stormwater prior to treatment.

Village of Sauget

Sauget is a heavily industrialized community with a residential population of approximately 200 inhabitants. The Village also has the following five large industries([3]) which collectively employ about 2,500 people, generally working three shifts a day, seven days a week.

Monsanto Company - Produces a wide variety of industrial chemicals.

Edwin Cooper, Inc. - Primary products include additives for automotive oils and greases.

AMAX Zinc Company - Produces electrolytic zinc, sulfuric acid, and trace elements associated with zinc.

Cerro Copper Company - Primarily recovers copper from scrap copper and brass and converts this to copper tubing and other copper shapes.

([2])Description provided by Steven D. Smith, Treasurer, Sauget Sanitary Development & Research Association, February 1980.

([3])Additional Industries are listed in Section III.

EXHIBIT I

Midwest Rubber Company - Processes rubber tires and other rubber articles to produce reclaimed rubber primarily for the automotive industry.

Influent Water Quantity and Quality

The influent has an average flow of approximately 9 MGD, and contains various heavy metals and chemicals, some floating scum and oil, some grit primarily from ground water runoff, and sanitary wastes from residents and employees of the five industries.

Influent Water Pumps and Auxiliaries

Three 8,000 GPM acid resistant bronze centrifugal pumps handle the normal influent water and stormwater runoff. Normally one or two pumps will pump to the treating process and the remaining pumps, operating by level control, are used to pump stormwater. The pumps are powered with 100 HP, 600 RPM motors.

Because of the corrosive nature of the influent water, the pump bays and pits are either lined with fiberglass or acid resistant tile. Piping is either 316 stainless steel or fiberglass reinforced polyester. Valves are either 316 stainless steel or neoprene lined steel. Conventional trash screens are used ahead of pumps. Water flow through the treating system is measured with an orifice meter.

Stormwater Lagoons

A stormwater storage lagoon and a stormwater clarifier have been provided to handle excess influent. The storage lagoon has approximately 1,000,000 gallons capacity and is intended to handle the first flush of a storm. The water in this lagoon is returned to the influent pump bay automatically as the influent bay level drops.

The stormwater clarifier has approximately twice the capacity of the storage lagoon and it receives stormwater after the storage lagoon has been filled.

Scum and Oil Removal

This is recognized as a critical part of the operation for three reasons:

a) To meet effluent water standards.

b) To reduce interference with pH measurement and control.

c) To reduce blinding of filter cloths in the final step of the operation.

It is important to remove the maximum amount of oil in the pump bays to avoid emulsifying these substances when passing them through a pump. The plant currently uses 6 Brill Oil Skimmers.

Grit Removal

Grit removal follows pumping. A conventional sloped bottom concrete chamber of Chicago Pump Company design is used. The chamber is fiberglass lined. The cross sectional area of the chamber at the top is approximately 300 square feet, the volume is 3,500 cubic feet, and detention time is 4.7 minutes.

Air to the system for aeration and grit removal is supplied by a positive displacement Roots blower. Three air lift pumps, operating in timed sequence, discharge grit and water into the stilling well of an inclined screw conveyor. The water from the grit chamber overflows into a flume and flows to the lime neutralization step, and the grit is discharged into a dumpster for disposal at a landfill.

Lime Slaking for Neutralization

High calcium quick lime is slaked and diluted to 10 to 15 percent slurry for neutralization. The lime slaking and storage equipment consist of two steel cone bottom silos of 125 ton capacity each; two 8,000#/hr. Wallace & Tiernan lime slakers; a 3,000 gallon pump tank; two circulating pumps; a 100,000 gallon lime slurry storage tank; two lime slurry feed pumps; associated steel pipe and controls. Quick lime is received in hopper trailers and is trucked from St. Genevieve, Missouri. The lime slakers use city water for slaking and plant effluent water for dilution. The slaking rate is generally 2,000-3,000#/hr. Quick lime feed and slaking water addition are closed loop control and dilution water addition is open loop control based upon specific gravity of the slurry.

Neutralization

The neutralization equipment consists of three adjacent agitated concrete chambers through which the water to be treated flows in series. Each chamber has a cross sectional surface area of 730 square feet and is 20 feet deep. The detention time of each chamber is 14.7 minutes. The first chamber is fiberglass lined and the second and third chambers are unprotected. Any two of the three chambers can be used for neutralization with the third chamber being an installed spare.

Electrodes measure the pH of wastewater entering the first chamber and leaving the first, second, and third chambers. Two of the last three electrodes are used for pH control by a closed loop feed back system. Lime slurry for neutralization is drawn from the circulating loop of the 100,000 gallon tank. Instantaneous rates of 25,000# lime/hour can be added to the neutralizers. pH of the final neutralizer is controlled at approximately 8.5.

Polyelectrolyte Solution

A Wallace & Tiernan polyelectrolyte solution machine is used to dissolve polyelectrolyte powder in city water to produce a 0.25 to 0.50 percent solution for addition to the neutralized water. A polyelectrolyte concentration of approximately 0.5 ppm is required to produce a stable floc which will readily settle.

Splitter Box

The flow leaving the neutralization chambers flows to a splitter box where it is divided into two equal parts. Each part then goes through a rapid mix chamber, a flocculation system, and a clarification basin.

Rapid Mix Chamber (Two Units)

The rapid mix chamber consists of two agitated concrete basins where polyelectrolyte solution diluted with city water is mixed with neutralized water. The basin has approximately 250 cubic feet capacity and 0.67 minute detention time/unit.

Flocculators (Four Units)

Two flocculators in parallel receive the flow from one rapid mix chamber. The flow enters at one side near the bottom at the head end of the flocculator. Each flocculator is 18 feet wide by 36 feet long by 10 feet deep and provides a detention time of 35 min./unit. A low level of agitation is provided in each flocculator with four, three, and two paddle mixers in series and separated by partial baffles. Each mixer has adjustable speed drive.

A slow moving continuous chain and paddle type rake moves the sludge to a collection hopper at the discharge end of the flocculator and entrance end of the clarifier. This same rake moves any floating oil or scum on the surface of the water to a collection trough at the entrance end of the flocculator.

Clarifiers (Two Units)

Two flocculators flow into one clarifier. Each clarifier is a concrete basin 72.5 feet wide by 166.5 feet long with a liquid depth of 10 feet. This provides a detention time at 8 MGD of 5.4 hours/unit.

Each clarifier has at its entrance end three sludge collection hoppers in the form of inverted pyramids. Each hopper has a capacity of approximately 1,840 ft^3. A continuously operating traveling bridge type sludge rake drags the sludge forward to the three hoppers and the floating scum and oil to a collection trough. The collection trough drains to a pit.

Water overflowing the clarifier is collected in a series of serpentine weirs, flows to a collection pit and from there to the north bay of the pump house.

Effluent Water Use and Disposal

Two pumps supply effluent water for use in dilution of the lime slurry after the slaking step. The effluent water then gravity flows to the Mississippi River, or to the Sanitary District Pumping Station to be pumped to the River (when it is over Stage 15.)

Sludge Dewatering

By use of horizontal centrifugal pumps, sludge is transferred from the six sludge collection pits of the clarifiers to a sludge holding tank in a near-by sludge filter building.

The filtration equipment consists of three 10 foot diameter by 16 foot long continuous cloth belt rotary vacuum filters, manufactured by Envirex, Inc. The auxiliaries for each filter consist of a Nash vacuum pump, vacuum receiver and self-priming filtrate pump. The filters and auxiliaries are conventional units without special or unusual features of any type. Lime is added to the sludge slurry for use as a filter aid. The filter cake discharges onto a belt which discharges the cake into a dumpster box. The filter cake is disposed of at a landfill. The filtrate flows back to the process.

Work Force and Routine Operations

The work force consists of a manager, engineer, foreman, secretary, chemist, assistant foreman, and, hourly operational and maintenance personnel. The plant is manned 24 hours/day.

Operating procedures have been written which outline the detailed methods for operating the various items of equipment and sections of the plant.

Maintenance practice consists of scheduled lubrication, inspection, and repair or replacement. In-plant repairs are limited to reasonably small work. Contract preventive maintenance is used for specialized items such as instrumentation, electrical and lime slaking units.

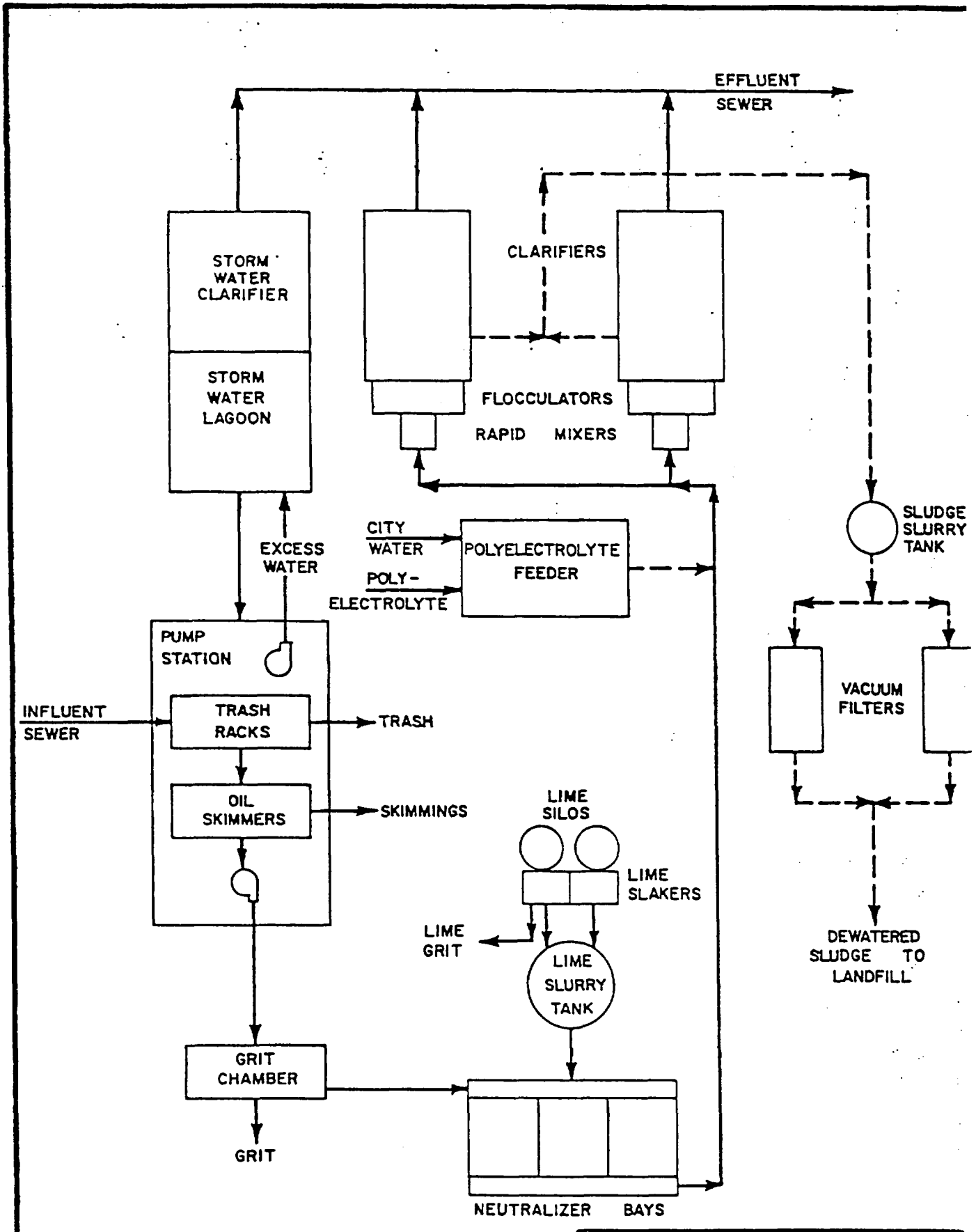

FIGURE 1

VILLAGE OF SAUGET

PHYSICAL - CHEMICAL

SEWAGE TREATMENT PLA

C07696

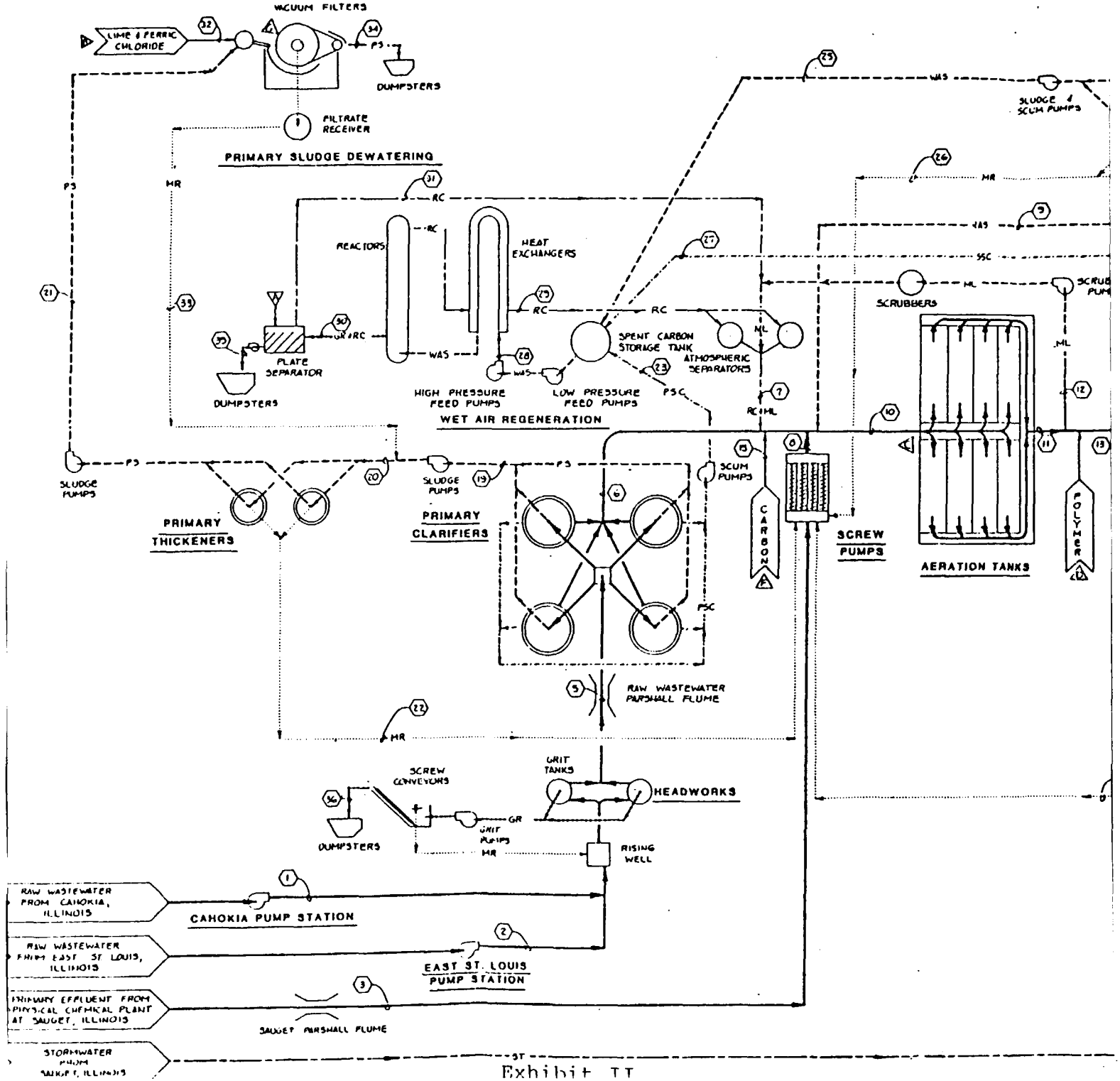
VACUUM FILTERS
LIME & FERRIC CHLORIDE
DUMPSTERS
FILTRATE RECEIVER
PRIMARY SLUDGE DEWATERING
REACTORS
HEAT EXCHANGERS
SPENT CARBON STORAGE TANK
ATMOSPHERIC SEPARATORS
PLATE SEPARATOR
HIGH PRESSURE FEED PUMPS
LOW PRESSURE FEED PUMPS
WET AIR REGENERATION
SLUDGE & SCUM PUMPS
SCRUBBERS
SLUDGE PUMPS
PRIMARY THICKENERS
PRIMARY CLARIFIERS
SCUM PUMPS
CARBON
SCREW PUMPS
AERATION TANKS
POLYMER
RAW WASTEWATER PARSHALL FLUME
SCREW CONVEYORS
GRIT TANKS
HEADWORKS
GRIT PUMPS
RISING WELL
RAW WASTEWATER FROM CAHOKIA, ILLINOIS
CAHOKIA PUMP STATION
RAW WASTEWATER FROM EAST ST. LOUIS, ILLINOIS
EAST ST. LOUIS PUMP STATION
PRIMARY EFFLUENT FROM PHYSICAL CHEMICAL PLANT AT SAUGET, ILLINOIS
SAUGET PARSHALL FLUME
STORMWATER FROM SAUGET, ILLINOIS

Exhibit TT

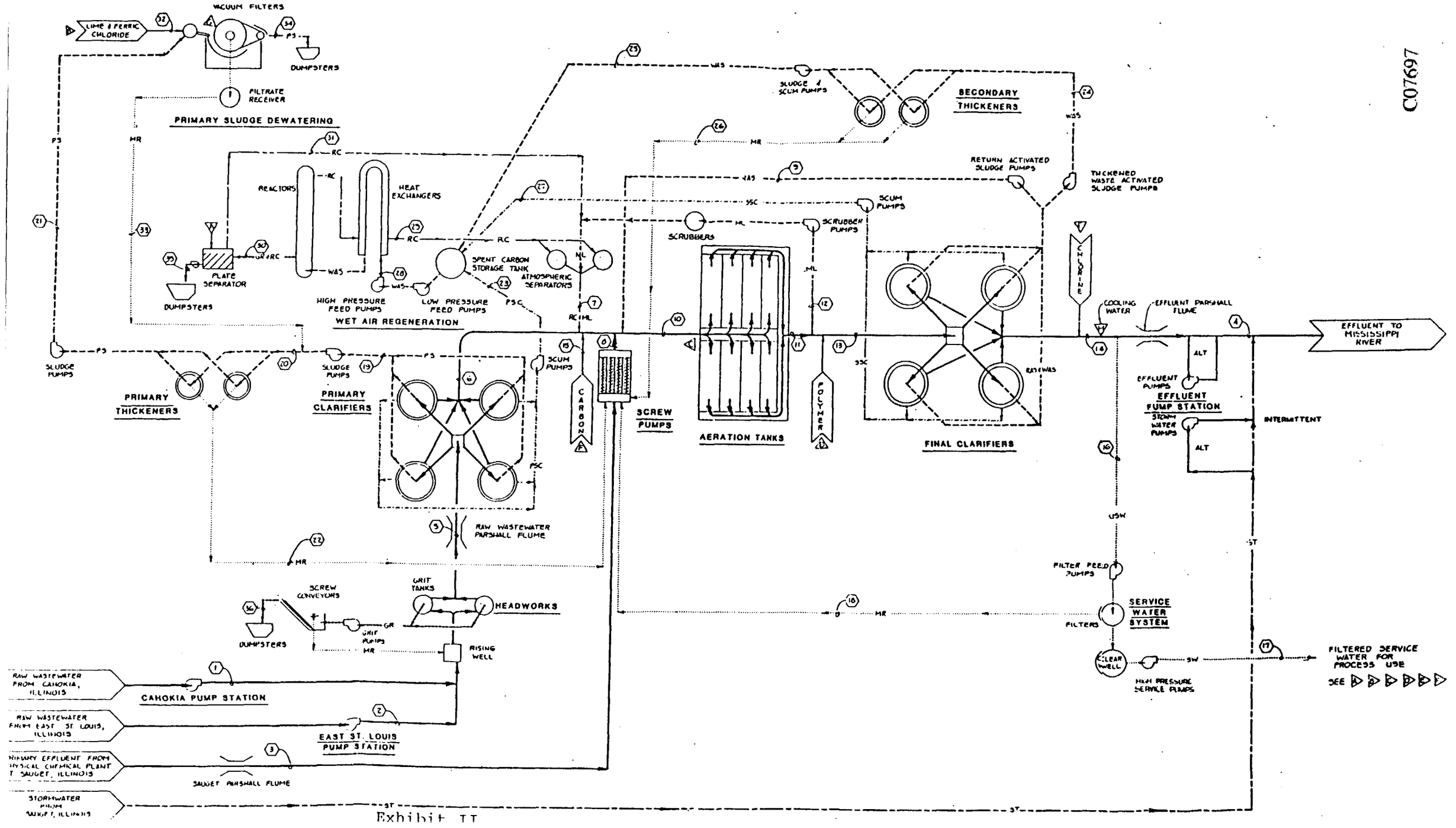

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Exhibit TT

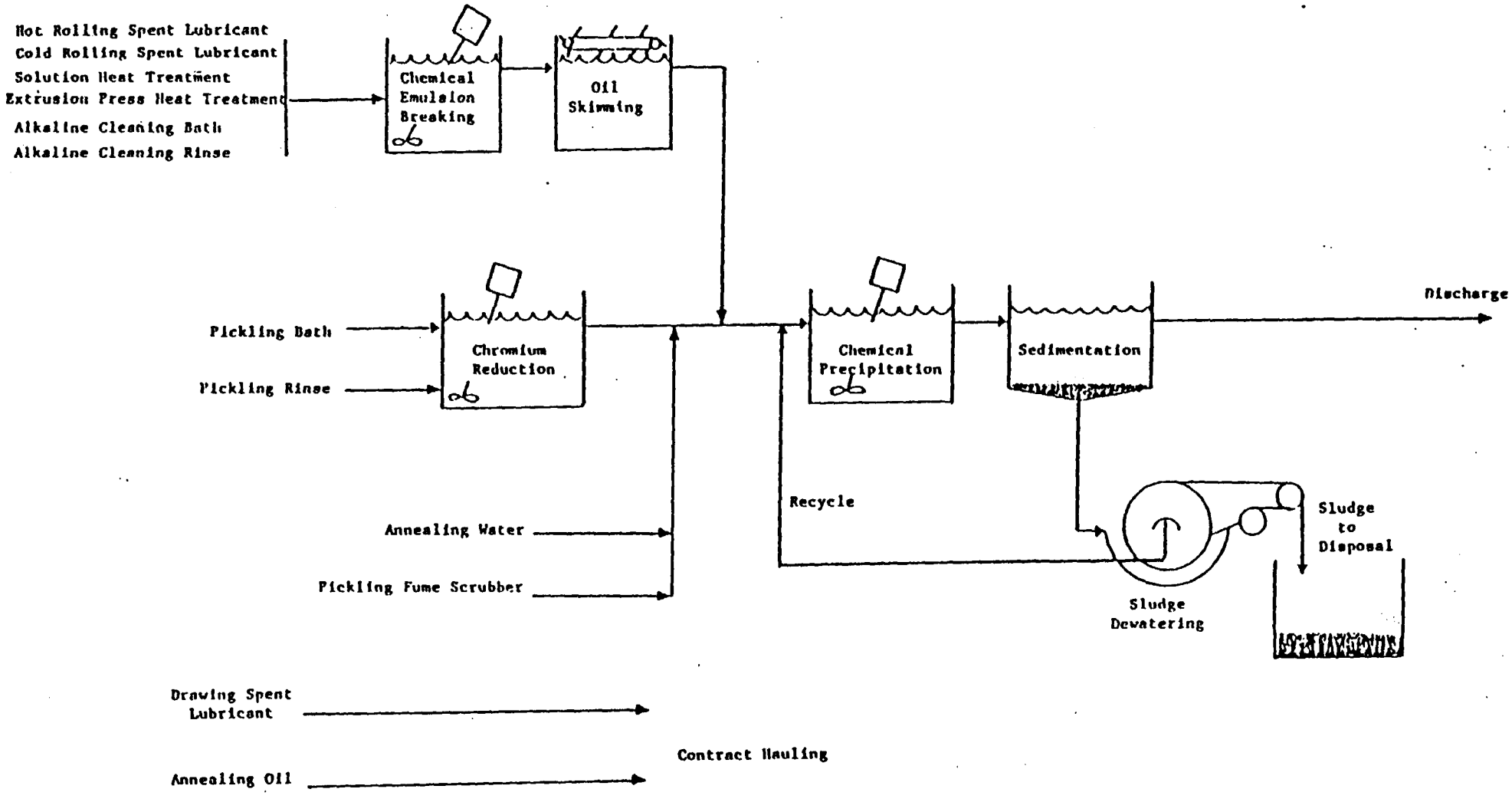

EXHIBIT LW38

C07704

FIGURE X-1

Option 1 Treatment Train

DESCRIPTION OF ALTERNATIVE PRETREATMENT SYSTEM

If Cerro Copper Products is required to meet the copper forming guidelines, it will be necessary to install a pretreatment plant which will receive collected waste water from the various installations included in the Cerro operations. The existing network of sewers is extensive and complex with intermixing of various wastes throughout the system. It would, therefore, be necessary to install a great number of new sewer lines throughout the plant, most of which would necessarily pass through existing operations, underneath paved surfaces, and would require extremely intricate planning and design to avoid interference with the existing facilities. Since the existing system delivers waste water to the Sauget Treatment Plant at two different points which are about 1500 feet apart, it would also be necessary to construct an entirely new collection and delivery system to deliver waste to a single new pretreatment plant.

It would also be necessary to acquire additional land for a new pretreatment plant since suitable space does not exist on the present property and a suitable site contiguous to the plant is not available. It is not known exactly what property could be available for this purpose and it is, therefore, not possible to make a realistic estimate of acquisition cost and installation cost without an extensive, time consuming investigation.

Based on the best information currently available, an alternative pretreatment system would involve a construction program covering a period of 42 months at the following estimated cost:

Capital Costs

Isolation of Non-Contact Cooling & Sanitary Waste	$1,700,000
Revisions & Relocations for Process Waste Water Sewers	600,000
Interconnection for the Two Separate Process Systems	750,000
Land Acquisition for Pretreatment Plant	150,000
Utilities and Services for New Pretreatment Plant	400,000
Pretreatment Plant	2,500,000
Total	$6,100,000

Operating Costs (Annual)

Labor	$ 250,000
Materials & Services	200,000
Total	$ 450,000

Law Offices
Martin, Craig, Chester & Sonnenschein
115 South La Salle Street
Chicago, Illinois
60603

TELEPHONE 368-9700
AREA CODE 312

March 23, 1984

Mr. Paul Tandler
Cerro Copper Products Co.
P.O. Box 681
East St. Louis, IL 62202

Dear Paul:

Enclosed is a revised copy of Appendix A. This copy includes a short section on the effect of using the combined wastestream formula to determine alternative copper forming limits.

After you have had a chance to review that section, please call me with your comments.

Very truly yours,

M. Therese Yasdick

MTY:ek
Encl.

cc: Mr. S. A. Silverstein
Mr. Steven Smith
Mr. Harold Baker, Jr.

C07716

APPENDIX A

The fundamentally different factors which justify a variance from the national limitations and the reasons why a variance is appropriate with respect to the Cerro plant operations are described in this appendix.

1. Processes employed, process changes, and engineering aspects of the application of control technology. (40 C.F.R. §403.13(d)(5))

The Cerro plant is located on an approximately 64-acre site in Sauget, Illinois. Plant operations are generally identified in three separate classifications: casting, electrolytic refining and fabrication. Cerro products include electrolyte copper cathode and copper tubing. The plant employs approximately 750 persons. Cerro discharges cooling water and process wash water to the Village of Sauget Publicly Owned Treatment Works ("POTW"), after primary settling at the Cerro plant.

The Sauget POTW is a physical/chemical treatment plant that was designed for the treatment of complex industrial wastewaters.* It started operation in 1966 as a primary

*A 1970 study to analyze the characteristics of Sauget wastewater and to develop a proposal for an advanced wastewater treatment plant demonstrated that the most cost-effective and efficient means of treating the discharge from the various Sauget industries was combined chemical treatment at the Sauget POTW. Individual treatment by each industry was also examined but rejected because it was far more costly than combined treatment. Thus, it is clear that the present Sauget POTW was intended to be the pretreatment facility for each of the five Sauget industries.

plant. In 1977, a new facility was completed which, in addition to upgrading the pre-existing facility for removal of scum and oil, provides for neutralization of acidity, precipitation and removal of heavy metals, and lagooning of stormwaters. (See Exhibit I for detailed description and schematic of Sauget Treatment Plant.) Ninety-eight to ninety-nine percent of the Sauget POTW's influent is from five large industries which are generally operating three shifts per day, seven days per week. The other one or two percent is municipal waste from Sauget's population of 200.

Presently, the Sauget POTW discharges into the Mississippi River. However, within five years the Sauget POTW will begin discharging to a regional treatment plant providing additional biological treatment for BOD, suspended solids, oil and phenol. Like the Sauget POTW, the regional facility was designed to treat complex industrial waste. (See Exhibit II for Regional Treatment Plant Schematic.)

The Village of Sauget undertook to design, construct and operate the regional wastewater treatment facility at the suggestion of the Southwestern Illinois Metropolitan Area Planning Commission which indicated that effective secondary wastewater treatment for St.Clair and Madison Counties could be provided through the development of a regional treatment facility.

Cerro and the other local industries have agreed to provide funding guarantees for the regional plant in order to finance the $42 million local share bond issue.

The basis for such a commitment by these industires was that the Sauget POTW and the regional treatment plant would be deemed to constitute the required pretreatment facilities for the contributing industries under the various categorical guidelines, including the copper forming guidelines under consideration here. Indeed, the regional facility was designed specifically to handle industrial, as well as municipal, waste.

As early as 1973, the U.S.EPA and Illinois EPA were aware of and supported the development of the regional plant. Furthermore, since November 24, 1982, Sauget and the U.S.EPA have discussed in detail whether pretreatment by industries located in Sauget was necessary in light of the removal capabilities of the Sauget POTW and the regional treatment facility. U.S.EPA has assured both Cerro and Sauget that they did not intend to require pretreatment facilities for contaminants treated by the existing Sauget POTW and to be treated by the regional plant. Likewise, U.S.EPA has assured Cerro and Sauget that the regulations were not intended to be applied to jeopardize the operation of the Sauget POTW and the regional wastewater treatment plant.

Thus, Cerro and Sauget are in a clearly unique position. Both Illinois and U.S.EPA have recognized this. In a letter dated August 4, 1982 from Charles Sutfin of U.S.EPA to Jack Malloy of Monsanto, the Agency indicated that it was

> "very interested in the Regional Treatment Plant being constructed. We feel the new plant will have the capability to remove and treat some of the toxicants which are presently entering the Village of Sauget's treatment plant. Also, the Sauget physical/chemical treatment facility provides a unique pretreatment feature that coordinates industrial pretreatment with the regional wastewater facility. (emphasis added).

The Illinois EPA concurred in Mr. Sutfin's position in a September 28, 1982 letter from Gary P. King of Illinois EPA to Richard J. Kissel, counsel for Sauget and Cerro. (These letters are attached hereto as Exhibit III.) Despite the U.S.EPA's interest in the development of the regional facility, Cerro, an industrial user of that facility, is to be subject to more stringent mathematically based copper forming limitations than other facilities merely because its wastewater is combined with that of other industrial users before treatment.

a. Removal Credits

Under Section 307(b)(1) of the Clean Water Act, a POTW is given authority to revise the categorical limits for its industrial users to reflect the removal of regulated pollutants by the POTW where such POTW "removes all or any part of such toxic pollutant and the discharge from such works does not violate that effluent limitation or standard which would be applicable to such toxic pollutant if it were discharged by such source other than through a publicly owned treatment works..." (33 U.S.C. §1317(b)(1)) The Agency has purported to provide the formula by which POTWs may revise the categorical limits in 40 C.F.R. §403.6(c)(4)(i). ("removal credits"). However, we must point out that application

of the removal credits scheme in the present circumstances would be inconsistent with the statutory mandate in Section 307(b)(1).

Rather than affording industrial users of a POTW relief from the copper forming pretreatment standards, application of the removal credits scheme imposes an onerous burden upon the industries and municipalities alike. By use of a "combined wastestream" concept, the removal credit scheme fails to account for efficiently designed wastewater treatment systems in municipal/industrial settings. For example, if the removal credits scheme were applied by Sauget's POTW to give "relief" to one of its industrial users whose effluent includes copper, the following would result:

> The physical/chemical system of the Sauget POTW treats copper to 0.5 mg/l near its solubility level. This is the present effluent limitation of the POTW's NPDES permit. By using a solubility system, and by adjustments of chemicals and pH, the POTW can reduce the influent concentrations of copper to 0.5. In the removal ratio formula, $\frac{I-E}{I} = r$, (proposed 403.7(b)(2)(iv))* the effluent concentration E for the Sauget POTW is 0.5 mg/l. The second element of the removal ratio is I, the influent concentration to the POTW. In the instance of a copper discharge to the Sauget POTW, the concentration could be 10 mg/l at the industrial discharge, but be 2 mg/l at the influent to the POTW. Therefore, I is 2 mg/l. Using the removal

*The currently applicable removal credit scheme does not provide a formula for determining the removal ratio, however, the definition of removal rate in 40 C.F.R. §403.7(a) is based on the ratio of influent and effluent levels. Thus, the proposed formula appears to simply implement the previous definition of removal rate.

ratio formula, the removal ratio is 75%, even though the initial discharge of copper was at a strength of 10 mg/l. When the removal ratio is applied to obtain the revised pretreatment standard using the formula $Y = \frac{x}{1-4}$, the effect is obvious. If the pretreatment standard is 0.5 mg/l, then the revised pretreatment standard is 2 mg/l.

For the Sauget industry, pretreatment to 2 mg/l would be required, even though the POTW is specifically designed to remove copper to 0.5 mg/l from the industry's discharge of 10 mg/l of copper. Indeed, the Sauget POTW utilizes a treatment technology for removal of heavy metals which exceeds the prescribed technology for copper forming facilities. (Compare Exhibit I with Exhibit IV, flow diagram for PSES system.) Cerro and the other Sauget industries, which constitute 99% of the influent to the Sauget POTW, will be required to perform the same level of treatment twice. Thus, the alternative concentration limits developed by applying the removal credits scheme result in mathematically based limitations bearing no relation to the removal capability of the Sauget POTW.* This was not the congressional intent expressed in Section 307(b)(1) of the Clean Water Act.

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*Comments to this effect were provided to the U.S.EPA in a letter dated February 21, 1983, addressed to Mr. Ernst P. Hall in the Effluent Guidelines Division. However, these comments are not reflected in the final development document. In its copper forming comment summary and response to the issue which were specifically raised by Cerro, the U.S.EPA stated that "[t]he standards being promulgated establish national pretreatment standards. Issues relating to individual POTWs are not addressed by this rulemaking."

As U.S.EPA itself has recognized, the relationship between Cerro and Sauget is clearly unique as to the equipment, facilities and processes employed in water treatment operations. (See Exhibit III.) Furthermore, the alternative copper forming limits to be imposed upon Cerro by the application of the removal credits formula are more, rather than less, stringent. For these reasons, we believe that it is appropriate for a fundamentally different factors variance to be granted in the present circumstances.

b. Combined Wastestream Formula.

The preamble to the final copper forming regulations describes the processes ancillary to basic copper forming operations which are to be regulated. These regulations were chosen because the wastestreams they produce contain significant amounts of pertinent pollutnats. These ancillary operations include hot rolling, cold rolling and draining. 48 Fed. Reg. 36942 at 36944-5. However, other ancillary wastestreams, including boiler blowdown and non-contact cooling water likewise contain significant levels of regulated pollutants.

Although these wastestreams which were not considered in the development of the copper forming limits, are not ordinarily treated as fundamentally different, we would like to emphasize that to the extent that these ancillary wastestreams must be factored out of the effluent composition

computation, any application of the combined wastestream formula* will have a serious impact on the abiality to comply with the copper forming limitations at the Cerro plant.

Ancillary wastestreams such as boiler blowdown, noncontact cooling water, and other utility and sanitary wastestreams are as much a necessary part of facility operations as those ancillary streams which the Agency has chosen to regulate under copper forming guidelines. These wastewaters contain regulated pollutants and are amenable to treatment by the same processes used to treat other copper forming wastewaters. Moreover, they can be beneficial to those processes in terms of pollutant removal efficiency and reduction of the amount of treatment chemical required.

When the combined wastestream formula is applied in these circumstances, serious problems of compliance with the copper forming limitations arise. Because the noncontact cooling, boiler blowdown and sanitary wastestreams are not among the regulated ancillary wastestreams, they are defined as "dilute" for purposes of applying the combined wastestream formula. While the basic assumption underlying the combined wastestream formula is that dilute streams contain no pollutants, Cerro's so-called "dilute" streams do contain pollutants. Since the formula provides for the limitation to become

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Because the wastestreams at the Cerro facility are combined prior to treatment, Cerro must apply (40 C.F.R. §403.7) the combined wastestream formula to the copper forming industry categorical limits to obtain an alernative numerical limitation.

more stringent in proportion to dilution, the resultant limits are simply technically unattainable.

Furthermore, application of the combined wastestream formula imposes unnecessarily stringent effluent limits. As the proposed development document suggested, most effluent pollutant levels are relatively independent of the influent levels over a wide range of influent concentrations. (See Figures VII-9 through VII-19 attached hereto as Exhibit VI). This is because the metal concentration in solution is limited by its equilibrium solubility. If pH is controlled within optimum limits, than effluent concentrations are determined by an equilibrium solubility and the hydraulics of the treatment system. Influent concentrations have only a minor effect at a very high and low concentration. For example, when influent concentrations are below the equilibrium solubility limits at the operating pH, then none of the metals in the influent will precipitate out and the effluent concentration will vary with the influent concentration. At concentrations above the equilibrium solubility limit, flocculation and hydraulics then determine the efficiency of removal of only the precipitated metallic hydroxide. Very high concentrations may cause hindered settling thus producing unacceptably high concentrations of suspended metallic hydroxides in the effluent. Thus, a well operated

---

*The proposed development document referred to plots of law waste concentration verus effluent concentration which were generated for cadmium, aromium, copper, lead, nickel, aluminum, zine, iron, total suspended solids and mangenese.

plant will produce the same concentration of metallic hydroxides in the effluent (within relatively narrow limits) regardless of the influent concentration. (within relatively broad limits). If ancillary flows are added to the system before treatment then these flows will not generally cause a decrease in the effluent metals concentration, unless the influent concentration is below the solubility limit for the various metallic hydroxides at the operating pH.

Obviously then, factoring out these ancillary flows by way of the combined wastestream formula may impose unnecessarily stringent effluent limitations on the otherwise well operated treatment system.

As a result, we believe that the methodology used by U.S.EPA to establish national limits in the development document did not adequately recognize the nature or character of some of the ancillary flows necessary to support the forming which occurs at copper forming plants. Since ancillary flows such as boiler blowdown and non-contact cooling water play such an important part in the Cerro plant operations, we believe that it is appropriate for a fundamentally different factors variance to be granted in the present circumstances.

2. Cost of Compliance. (40 C.F.R. §403.13(d)(6)

Although the waste treatment technology installed at the Sauget POTW was intended to treat the combine waste from five different Sauget industries and despite the fact that the technology utilized by the Sauget POTW exceeds the prescribed technology for the copper forming regulations, Cerro cannot, without substantial additional expenditures,

achieve the copper forming limitations which are applied using the removal credits scheme.

In the text of the regulations published in the Federal Register on August 15, 1983, the U.S.EPA stated that the 45 indirect dischargers "will share investment costs of $9.2 million and annual costs of $7.7 million, including depreciation and interest." 48 Fed. Reg. 36942 at 36949. (emphasis added).

However, we estimate that minimum expenditures in excess of $6 million would be necessary to enable the Cerro facility to meet the copper forming regulations. (See Exhibit VII). This means that Cerro alone will have to expend two-thirds of what the Agency's estimated to be capital expense for the entire group of indirect discharging facilities covered by the copper forming regulations. Moreover, it must be emphasized that these are minimum anticipated expenditures which would not necessarily assure that all of the copper forming limitations would be met. The only practical method for assuring complete fulfillment of all such limitations would be separation of all of the existing plant sewer systems and providing separate treatment for each of the regulated and unregulated wastestreams from the differing plant operations. It is not possible at this time to state with any certainty what this total expenditure might be, but clearly it would be substantially more than the above minimum estimate.

Of course, the primary reason for the discrepancy between the Agency's estimated costs and the Cerro situation

is that Cerro would have to install a complete wastewater treatment facility. In the past, it contributed financially to both the development of the Sauget and the regional treatment facilities because such facilities were built to treat industrial wastes and were deemed to be industrial pretreatment facilities.

For these reasons, we believe that it is appropriate for a fundamentally different factors variance to be granted in the present circumstances.

SAUGET
SANITARY DEVELOPMENT & RESEARCH ASSOCIATION
2897 MONSANTO AVENUE
SAUGET, ILLINOIS 62206

1985 - 127

Ms. Theresa Yasdick
Martin, Craig, Clester, Connenschein
115 So. LaSalle Street
Chicago, IL 60603

Dear Terri

Attached is the cost information you requested along with some lauguage you may want to consider using in your brief. Feel free to use any of these thoughts with changes and additions you deem necessary.

I will be at the Monsanto, Delaware River Plant, Bridgeport New Jersey, 08014, c/o Ed Jamro, from 9/10 to 9/13. I look forward to your draft brief.

Very truly yours

Steve Smith
SS/te

C.C. W. Smull
P. Tandler

C07729

The existing Sauget Wastewater Treatment Plant is a Physical/Chemical Plant (P-Chem Plant), consisting of trash removal, oil skimming, pH adjustment to between 8 and 9, polyelectrolyte addition, flocculation, sedimentation, sludge removal and sludge drying.

This plant matches the description of the required end of-pipe treatment required and described on Page 15 and 16 of the Respondent's brief. Yet on Page 23 of the Respondent's brief they state that "the current level of treatment at the Sauget POTW is essentially primary treatment-settling of large solids". Cerro Copper and the Village do not agree with this statement.

The Agency confuses this issue by stating that the P-Chem Plant does not meet a 30 mg/l BOD and 30 mg/l TSS secondary standard. This is exactly why the Village has supported and financed the future Regional Treatment Plant (42 millions dollar local share). In summary:

Existing P-Chem Plant

-Provides the end-of-pipe BAT treatment required by the Agency.

-The Agency states (Page 13) that a "well operated POTW..., would generally remove an average of 50 percent (ranging from 20 to 70 percent) of toxic metals introduced to the POTW, while BAT normally removes 90 percent". The Sauget P-Chem Plant consistent removal rates are as follows*:

Copper	93.13%
Lead	93.22%
Nickel	70.08%
Zinc	93.22%

*Data submitted to the EPA in the Village's request for Removal Credits.

Regional Treatment Plant (Startup 12/83)

-Consists of biological treatment with the addition of the Zimpro powder activated carbon system.

-This system is designed to treat to levels of 30 mg/l TSS and 30 mg/l BOD and is generally considered BAT (or better) for organic removals.

-The regional plant should obtain further removals of metals, having the combined effect of well over the 90% removal achieved by BAT.

Add discussion of Cerro + the Village flow reduction over past 20 years?

The funding for the 1974 Physical/Chemical Plant were as follows:

	Engineering	Construction	Total	Percentage
Sauget Industries	1,062,021	7,870,000	8,931,721	87.68%
Village of Sauget*	-	800,000	800,000	7.86%
Federal Grant	455,152	-	455,152	4.46%
	1,517,173	8,670,000	10,186,873	

*supported by Industrial Tax Base

On Page 39 of the Respondents brief, the Agency states that "The Sauget POTW is a federally-funded, publicly owned treatment works". ← P.4 The only Federal Funds granted to the Physical/Chemical Plant was a $455,152 reimbursement for previous engineering costs. Over 87% of the funding was obtained from the Sauget Industries themselves, in which Cerro Copper financed the second largest percentage.

The Regional Treatment Plant, now under construction, is 75% federally funded with an additional 10% for innovative and alternate technology (i.e. the Zimpro process). However, the selling of the 42 million dollar local share bond issue, was feasible only by Cerro Copper and three other industries guaranteeing a minimum Regional Plant usage for 18 years. Cerro Copper Products minimum projected wastewater treatment costs for 1986 are as follows:

	Capital	Operations	Total
Physical/Chemical Plant	89,900	240,300	330,200
Regional Plant	166,740	159,324	326,064
			$656,264/yr

Now up to 564,000/yr (

The debt service for the Regional Plant will increase approximately 3% per year, and the Operations and Maintenance expense will increase depending on the economy. The above numbers do not include collections for rate covenant and special assessments.

Cerro Copper Products is guaranteeing over $650,000 per year for each of eighteen years to treat its wastewater in what we feel is the most socially responsible manner. That being:

-providing BAT level treatment for metals at the existing Physical/Chemical Plant.

-financially committing to the capital funding as well as the operations of the Regional Treatment Plant, which comprises of BAT treatment for organics.

-following the recommendation of the Water Quality Management Plan prepared by the Southwestern Illinois Metropolitan and Regional Planning Commission ~~of~~ by participating in an area wide regional approach to wastewater treatment.

-including the financially troubled East St. Louis into the Regional Treatment System. Without the Village of Sauget acting as lead agency and the industrial backing to sell the 42 millions dollar local share bond issue, the current discharge of raw sewage from East St. Louis would probably continue indefinitely.

Cerro Copper objects to Respondent's implication (on Pages 41, 42 and elsewhere) that their compliance cost would at most "exceed the Agency's estimated average...". Cerro Copper has, by cooperating with the EPA's wishes for a Regional Treatment Plant as well as the local 208 Planning Commission, already spent and committed to extensive wastewater treatment expenditures. To now require Cerro Copper to finance an additional $_____ capital to install pretreatment facilities to remove pollutants for which the Sauget Physical/Chemical Plant and Sauget Regional Plant are designed to remove, is unequitable and

penalizes Cerro Copper for its past voluntary commitments to treat its pollutants.

ITEM	REGIONAL COST	MONSANTO	PFIZER	CERRO	EDWIN COOPER	MIDWEST	AMAX
O&M Reserve*	$ 429,625	$ 121,584	$ 41,674	$ 15,037	$ 10,311	$ 6,015	$ 5,585
Debt Service	0	0	0	0	0	0	0
O&M Cost	0	0	0	0	0	0	0
Rate Covenant	0	0	0	0	0	0	0
TOTAL	429,625	121,584	41,674	15,037	10,311	6,015	5,585

* One month beginning Dec.'84

1985 (Jan.-Dec.)

ITEM	REGIONAL COST	MONSANTO	PFIZER	CERRO	EDWIN COOPER	MIDWEST	AMAX
O&M Reserve*	$4,725,875	$1,337,423	$458,410	$165,405	$113,421	$66,162	$61,436
Debt Service**	372,251	105,347	36,108	13,029	8,934	5,212	4,839
O&M Cost**	379,333	107,351	36,795	13,277	9,104	5,311	4,931
Rate Covenant**	93,063	26,337	9,027	3,257	2,234	1,303	1,210
TOTAL	5,570,522	1,576,458	540,340	194,968	133,693	77,988	72,416

*11 months (Jan.-Nov.'85)

**1 month. (Dec.'85)

1986 (Jan.-Dec.)

ITEM	REGIONAL COST	MONSANTO	PFIZER	CERRO	EDWIN COOPER	MIDWEST	AMAX
O&M Reserve	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Debt Service	4,764,013	1,348,216	462,109	166,740	114,336	66,696	61,932
O&M Cost	4,552,120	1,288,250	441,556	159,324	109,251	63,730	59,178
Rate Covenant	1,191,003	337,054	115,527	41,685	28,584	16,674	15,483
TOTAL	10,507,136	2,973,520	1,019,192	367,749	252,171	147,100	136,593

.76 MGD × $2,750/MGD = $46740/MO

C07735

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
1 NORTH WACKER DRIVE
CHICAGO, ILLINOIS 60606

August 10, 1973

Honorable Paul Sauget
Mayor, Village of Sauget
2897 Monsanto Avenue
Sauget, Illinois 62206

Re: Federal Sewage Works Grant
C170264

Dear Mayor Sauget:

An audit has been made of your sewage treatment works construction grant project. The project cut-off date was established earlier as 1-18-73

As a result of the audit the following are our findings:

Expenditures allowed for Federal participation: $1,517,173
Final Federal grant: $455,15?
Federal grant payments previously made: $455,152
Federal grant balance now due: -0-

This concludes the construction phase of your project as related to this grant. Federal interest and responsibility, however, continues as a result of your agreement with the conditions of our original grant offer.

Your cooperation during the course of this most worthwhile project has been appreciated.

Sincerely yours,

Kenneth R. Voight, Chief
Grants Administration Branch

C07736